DOCUMENT RESUME

ED 253 272 JC 850 041

TITLE	DRT/ASSET/Final Grade Study. Fund for Instructional Improvement Final Report, 1983-84.
INSTITUTION	Santa Rosa Junior Coll., CA.
SPONS AGENCY	California Community Coll. Fund for Instructional Improvement.
PUB DATE	30 Jun 84
NOTE	189p.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01/PC08 Plus Postage.
DESCRIPTORS	Community Colleges; Counseling Effectiveness; *Diagnostic Tests; Educational Counseling; *Grade Prediction; *Grades (Scholastic); Predictive Validity; *Predictor Variables; *Student Placement; Two Year Colleges

ABSTRACT

A study was conducted to compare scores on the main placement tests used at Santa Rosa Junior College (i.e., the Diagnostic Reading Test and pre-calculus and pre-algebra tests) and scores on the American College Testing Service's ASSET battery of tests with student course grades to see if any of the tests acted as a reliable predictor for success. A total of 350 student volunteers were tested, and many were provided with academic counseling and test interpretations. Student grades in nine separate courses were considered. Study findings included the following: (1) students taking courses recommended by counselors were more successful overall than were students taking non-recommended classes; (2) no one test proved to be a good predictor of success for all nine courses; (3) the reading and math tests were unable to predict success in any courses; and (4) scores on the reading test correlated significantly with students' overall grade point average. (LAL)

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ED253272

DRT/ASSET/FINAL GRADE STUDY

FUND FOR INSTRUCTIONAL IMPROVEMENT

Final Report

Assessment Office

Santa Rosa Junior College

June 30, 1984

JC 850041

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1. PROJECT DESCRIPTION

A. ADJUSTMENTS

Major changes in the form of deletions and curtailments were made to the original plan in order to accommodate the reduction in funding from $25,000 (proposed) to $10,800 (allocated). The original plan identified four principal components: 1) a Career Center information software package, 2) coordination of Career Center information with the instructional program, 3) development of an assessment and placement program, and 4) user evaluation of the components. The plan was adjusted to include only the assessment component (item 3 above), along with the appropriate segment of user evaluation (item 4 above). A second change was made in personnel: at mid-year, the Director of Assessment left the position and the Associate Dean of Admissions and Records assumed this additional responsibility.

B. INCLUSIVE DATES

The amended project formally began August 15, 1983 and the final written report was completed on June 28, 1984.

C. BRIEF DESCRIPTION

Development of an enhanced assessment program has been the ongoing goal of the College, and the development effort to upgrade the efficiency and effectiveness of the program has been considerably furthered by the research study carried out as part of this Instructional Improvement project.

The major goal of this research study was to compare scores on the main placement tests used at Santa Rosa Junior College (the Diagnostic Reading Test (DRT), pre-Calculus, and pre-Algebra tests), and scores on the American College Testing Service's ASSET battery of tests, with student course grades to see whether any of the tests acted as a reliable predictor for success. Three hundred and fifty students were tested and grades in nine separate courses were considered. Past research on the DRT, the pre-Algebra, and the pre-Calculus tests was examined, showing scores on all three tests as accurate predictors of student success in a number of courses.

Student subjects in the current study were volunteers, and a large number of them were provided academic counseling and test interpretations. Many also received one unit of credit for Guidance 65 as a result of their participation. However, it should be noted that the subjects may not have been a representative sample of SRJC students for two reasons: 1) they scored significantly higher on ASSET'S three basic skills tests than did a randomly selected group of subjects from fifty other two-year colleges; and 2) by participating they demonstrated more motivation in assessing their skills than average students demonstrate.

The role of counselor recommendations in facilitating student success was also looked at. It was found that students taking courses recommended by counselors were more successful overall than were students taking non-recommended courses. Success was defined in five separate ways, and students in recommended classes ranked higher in each way.

Results of the current study were generally inconclusive. No one test proved to be a good predictor of success for all nine courses.

The DRT and SRJC Math tests were unable to predict success in any course. Results were quite different than expected and contrary to past research. The small sample size and the possibility that the subjects were not a true representation of the SRJC student body were offered as possible explanations for the absence of expected results. The study concluded that more research may be needed to determine the accuracy of these results; and that for the time being, other factors along with test scores should be used for student placement at SRJC.

2. PROJECT MATERIALS

Materials developed under the auspices of this project include a 7-chapter written report supplemented with tables, charts, and appendices. A sample of these materials is enclosed; additional copies will be available directly to those requesting them.

3. PROJECT EVALUATION

The evaluation of this project is the composite work of several contributors. These several contributors include:

Students
Advisory Committee Members
Research Technician
American College Testing Service

A general evaluation of the project is incorporated throughout the written report, submitted with this final report. Specific contributions can be summarized as follows:

a. Students

All students who were involved in the ASSET project were considered. Evaluations were solicited from those enrolled in the Guidance 65 class. Responses from over 30% of the students were received and recorded. Appendix D of the final report contains the detail information.

b. Advisory Committee Members

The assessment program is served by an advisory committee. It is composed of faculty, administration, student, and staff representatives. The committee was consulted and involved in the planning, implementation, and evaluation of the assessment project. Appendix E contains sample agendas, meeting notes, and a newsletter, which demonstrate the involvement of this committee in the delivery and evaluation of assessment services.

c. Research Technician

Throughout the project, the research technician submitted evaluations of the data being collected. The project final report contains such evaluations. In addition, Appendix F provides a sample report of the technician and illustrates how his evaluations were communicated.

d. American College Testing Service

While the statistical analysis performed by ACT resulted in inconclusive findings, nonetheless Appendix 6 is attached to point out deficiencies in the project.

4. BUDGET EXPENDITURES

Category	Allocated	Expended
Professional Salaries	$6441.00	$5641.09
Student Assistant Salaries	700.00	1262.51
Employee Benefits	1245.00	495.57
Printing and Postage	----	593.02
Supplies	277.00	206.76
Other Direct Operating Expenses	2137.00	2601.05
	$10,800.00	$10,800.00

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CHAPTER 1: Introduction

Accurate and meaningful assessment of student skills, interests, and aptitudes is becoming more and more crucial for Community Colleges. The Legislature is mandating a more controlled matriculation process. Students also are demanding more accurate evaluation of their abilities as they choose career directions. Community College faculty and staff are wanting to determine skill levels that will predict success in courses. All of these demands depend upon an efficient and effective assessment program.

Upgrading the quality of assessment has been a goal of Community Colleges in general, and Santa Rosa Junior College in particular, for a number of years. Santa Rosa Junior College has been particularly interested in determining the accuracy and usefulness of the instruments used, and in determining test scores that predict student success in specific courses. In the past two years, a number of studies have been carried out at Santa Rosa Junior College with these goals in mind. The bulk of this report will be made up of descriptions of these studies and discussion of their results.

A number of other Community Colleges are in the midst of this same kind of investigation, and the efforts of Harbor Community College in Los Angeles, in particular, need to be noted. Harbor has developed "Project ACCESS," Action for Community College Enhancement of Student Success. This is a matriculation model based heavily on the American College Testing Progran (ACT)'s ASSET battery of tests. ASSET is a series of seven separate tests measuring English and math skills. Each of the tests can be administered separately or in any combination to assess specific student skills. Since Harbor has used ASSET, and within the past three years, mandatory placement scores have been developed for English and math courses. Assessing skills through ASSET and using the test scores as placement criteria are the core of Project ACCESS.

For many years, Santa Rosa Junior College has used the Diagnostic Reading Test (DRT) as its English placement exam. The test has been locally normed and has been found to be an accurate and effective predictor of success in English composition courses. The Santa Rosa Junior College English Department has been extermely pleased with the results from using the DRT for placement purposes. Recently, the Math Department at Santa Rosa Junior College has also felt the need for a placement test. As a result, it developed two instruments, the pre-Algebra and the pre-Calculus tests. Both have also proven to be accurate predictors of student success and have the strong support of the Math Department faculty.

The success experienced by Harbor College with ASSET, as well as by other Community Colleges using this battery, raised these questions at Santa Rosa Junior College: how effective would ASSET be at this college; and, would it be more effective than the measures currently used? As a result of these basic questions, a grant was written, and it was funded by the State Improvement of Instruction fund, to study the overall effectiveness of the DRT and Santa Rosa Junior College's math tests; and to compare them with ASSET.

A specific course was set up to recruit students for this study. Initially 292 students were enrolled and tested with the DRT, and math tests, and ASSET. A number of students were also given the Stanford Diagnostic Reading Test (SDRT). (This is a test used heavily by Santa Rosa Junior College's Reading Lab, and its relationship to ASSET and the DRT was also studied.) Student scores on the different tests were correlated to compare the tests themselves, and scores were compared with final course grades to determine which test best predicted grades. Scores and grades were also sent to ACT for analysis and to be part of the normative study ACT is conducting on ASSET.

Although effective testing is a critical part of assessment, interpreting the test scores and recommending appropriate courses from the results are also essential. To measure the role of this type of effective counseling in the overall assessment

process, another part was added to this study. Students' final grades were looked at and success in courses was evaluated by whether the courses had been recommended by a counselor. Through this part of the study, it was hoped that the importance of effective counseling could be demonstrated.

The remainder of this report describes past research, looks at the ASSET study in depth, and explores the relationship of successful counseling to the assessment process. Results are presented and are discussed in terms of current assessment practices and future needs. It is hoped that this report will shed light on the current effectiveness of the assessment process at Santa Rosa Junior College and can be a guide for future improvement and growth.

CHAPTER 2: Description of the Tests

The main tests used in the current study were the Diagnostic Reading Test (DRT), the ASSET battery of tests, and Santa Rosa Junior College's pre-Algebra and pre-Calculus tests. This chapter will describe the development, norms, and structure of each to assist the reader in understanding the body of this paper.

The DRT is one of the oldest and most reliable reading tests available. It was normed in the early 1950's and revised in the late 1960's. Santa Rosa Junior College locally normed the DRT in both 1973 and 1975, and has used it as a placement test for English courses since 1973. The original norms for the DRT did not correspond well with the performances of students at Santa Rosa Junior College. Because of this, the English Department converted scores to grade levels and used these as placement scores. Original norms, grade level conversions, and placement scores can be found in Table 2.1.

The DRT is a timed, multiple-choice test. It is made up of three sections: General Reading, Vocabulary, and Comprehension. The test yields separate scores for Vocabulary and Total Comprehension, and also gives an estimate of reading speed. The Vocabulary and Total Comprehension scores are added together to give a total score for the test. This total score is what is used for placement purposes at Santa Rosa Junior College.

ASSET is a battery of seven separate tests, three of which measure basic skills (Reading, Language Usage, and Numerical), and four of which measure more advanced skills (Advanced Language Usage, Elementary Algebra, Intermediate Algebra, and College Algebra). All of the tests are timed and multiple-choice. Scores on an individual or a combination of tests can be looked at to get an overall profile of the student. ASSET was developed by the American College Testing Program (ACT).

ASSET is a very new battery of tests, and norms for it are still being developed. It was first used in the Los Angeles Community College District, in Summer, 1982.

That district developed local norms and placement cut-off scores, which can be seen in Table 2.2. ASSET was found to be so successful there that all incoming freshmen at Los Angeles Harbor College are now required to take at least a portion of the battery.

The Santa Rosa Junior College pre-Algebra and pre-Calculus tests were developed by the Math Department in 1982. They were designed specifically as placement instruments and have been used as such since Spring, 1983. The two tests were normed in Fall, 1982, using both continuing students and newly entering freshmen. Norms and recommended placement scores can be found in Table 2.3.

Both the pre-Albehra and pre-Calculus tests are timed multiple-choice. Students take the test which corresponds to the course in which they wish to enroll. Both require the students to do a number of mathematical manipulations, and determine the student's readiness to take the desired course. These tests have proven to be successful enough that the Math Department is now preparing a similar test for lower level courses.

TABLE 2.1: Comparison of DRT Norms, Grade Conversions, and Recommended Placements

Original Norms

Percentile	Test Score
90	90
80	87
70	83
60	80
50	77
40	73
30	69
20	64
10	57

DRT Grade Level Score Conversion

Grade Level	Test Score
13.8	79
13.5	75
13.0	73
12.8	72
12.5	69
12.0	68
11.8	67
11.5	65
11.0	63
10.8	60
10.5	58
10.0	56
9.8	54
9.5	52
9.0	50
8.8	48
8.5	47
8.0	42
7.8	41
7.5	36
7.0	32
6th and below	00-25

Table 2.1a: DRT Placements Cutoffs

Test Score	Placement
68 - 100	English 1A (English Composition)
55 - 67	English 100 (Reading and Writing Improvement)
26 - 54	English 105 (Basic Reading and Writing Skills)
00 - 25	English 107 (Beginning Reading)

TABLE 2.2: Preliminary Norms for ASSET Basic Skills Tests and Recommended Placement Scores

Percentile	Language Usage	Reading	Numerical
99	58-64	39-40	31-32
96	55-57	33-38	28-30
88	51-54	29-32	26-27
76	47-50	24-28	22-25
60	44-46	22-23	19-21
40	40-43	19-21	15-18
24	36-39	17-18	12-14
12	30-35	13-16	10-11
4	00-29	00-12	00-09

Recommended Placement Scores

Language Usage	Reading	Numerical
45-64 English 1A	29-40 English 1A	23-32 Math 150A
40-44 Decision Zone	20-28 English 100	20-22 Decision Zone
25-39 English 100	16-19 Decision Zone	00-19 Math 170 or 160
22-24 Decision Zone	00-15 English 105	
00-21 English 105		

Elementary Algebra	Intermediate Algebra	College Algebra
22-25 Take College Alg. test	21-25 Take College Alg. test	22-25 Math 1A
15-21 Math 151 or Math 150A	14-20 Math 56	20-21 Decision Zone
12-14 Decision Zone	11-13 Decision Zone	12-19 Math 58, 57, or 11
00-11 Math 170 or 160	00-10 Math 151 or 150A	10-11 Decision Zone
		00-09 Math 56

TABLE 2.3: Comparison of SRJC Math Test Norms, Percentiles, and Recommended Placements

Percentile	Pre-Algebra Norms	Pre-Calculus Norms
100	50	40
90	41	35
80	36	32
70	33	29
60	30	26
50	28	24
40	25	22
30	21	19
20	17	17
10	8	13

Recommended Placement Scores

Pre-Algebra		Pre-Calculus	
30-50	Acceptable for Math 56 (Intermediate Algebra)	24-34	Acceptable for Math 1A (Calculus)
25-29	Marginal for Math 56	18-23	Marginal for Math 1A
20-24	Very Marginal for Math 56	00-17	Not Acceptable for Math 1A
00-19	Not Acceptable for Math 1A		

* Note: Pre-Calculus test was reduced from 40 to 34 questions. Placement Scores were reduced accordingly.

Diagnostic Reading Test

In Spring, 1983, a major research study was undertaken at Santa Rosa Junior College. Student DRT scores were compared with final course grades for 22 separate classes given in Fall, 1982. The goal was to find scores on the DRT that would predict success in courses. Six hundred forty-one students were involved from 13 Occupational Courses and nine Liberal Arts Courses (Table 3.1).

A correlational analysis was done on the data and a significant, positive relationship was found between DRT scores and final grades (Table 3.2). This was the case for Occupational students, Liberal Arts students, and both types of students combined. All of these correlations have less than 1% chance of error. There was a great deal of variance in the scores, indicating other factors besides DRT scores affected grades. However, the significance of the correlation between scores and grades was high enough to conclude that on the whole, the higher a student scored on the DRT, the better they performed in their respective course.

An analysis of variance was also done on the data, comparing DRT scores with final grades (Table 3.3). Scores were broken into four levels: 68 and above (English 1A); 55-67 (English 100); 25-54 (English 105); and 24 and below (English 107). The results show a significant difference between the mean scores of these groups, indicating that the higher a student scored on the DRT, the better their final grade. It was also concluded from the results that a DRT of 55 or above predicted success in the courses, whereas 54 or below predicted marginal performance and probable failure (Charts 3.1, 3.2, and 3.3).

As could be expected, means in DRT scores for successful students, especially those receiving A's and B's, were slightly higher for Liberal Arts students than for Occupational students. It can be assumed that reading skills play a more vital role in these classes, and therefore, stronger reading skills may be needed for success. However, all of the results from the study point to the need for

adequate reading skills for success in Occupational courses as well. There were only two exceptions to this out of the 641 people in the study; a student with a DRT of 22 receiving an A in an Occupational course and a student with a DRT of 24 receiving a grade of C.

An interesting sidelight to this study was that this prediction (a score of 54 or below would indicate marginal performance) did not hold for students with Indo-Chinese surnames. There were 16 such students in the study, and 14 of those had scores on the DRT at 54 or below. These students received five A's, eight B's, and one D. Obviously, other factors were involved in helping these students gain high grades.

Pre-Algebra and Pre-Calculus Tests

In 1982, the Math Department decided to create its own placement tests for Algebra and Calculus courses. The tests were created in Summer of 1982, and normed that Fall. Five hundred thirty-four students were involved in the norming of the pre-Algebra test, and 309 were involved in the norming of the pre-Calculus test. Test scores and corresponding percentiles are given in Table 3.4.

In Spring, 1983, a study was done to measure the predictability of the pre-Algebra test. Student test scores were compared with final grades in Intermediate Algebra (Math 56), for Fall, 1982. The study found that no student with a test score of 40 or more earned a D or F. Very few with 30 or more withdrew, and withdrawals increased dramatically for scores less than 30 (Chart 3.4). The study concluded that the test is a reasonable indicator of possible success. A score of 30 or more indicates high probability of success; less than 20 indicates slim chance of success with a 50% chance of withdrawal. The suggestion was made that students scoring 20-29 should be advised that success in the course is possible for them, but considerable effort may be necessary.

Both the pre-Algebra and pre-Calculus tests have been used extensively since their inception, and the Math Department is extremely pleased with the results.

A placement for lower level math courses is currently being developed and should be normed by Spring, 1985. As will be discussed later, both the pre-Algebra and pre-Calculus tests were compared with ASSET Math tests as a major part of the current study.

TABLE 3.1: Courses Invloved in the 1982 DRT Study

Occupational Courses	Liberal Arts Courses
Agriculture 60	Biology 11 (2 sections)
Agriculture 70	Biology 160
Agriculture 90A (2 sections)	Philosophy 3 (3 sections)
Electronics 60 (5 sections)	Philosophy 6A (2 sections)
Forestry 50	Philosophy 7
Forestry 51 (2 sections)	
Forestry 66	

TABLE 3.2: Correlation Coefficients
For DRT vs. Grades

Sample	Number	Correlation	Significance	Mean	Range
Occupational Students	288	.303	.01	65.30	91-22
Liberal Arts Students	353	.319	.01	67.43	94-30
Occupational/Liberal Arts Combined	641	.306	.01	66.47	94-22

TABLE 3.3: Relationship Between DRT Scores and Final Grades

	Occupational Courses			Liberal Arts Courses			Combined Courses		
Test Score	n	mean grade	std. dev.	n	mean grade	std. dev.	n	mean grade	std. dev.
100-68	141	77.02	11.76	194	75.57	11.33	335	76.24	11.56
67-55	84	71.67	11.39	106	71.32	10.61	190	71.37	10.80
54-25	60	68.50	12.87	52	65.00	10.94	112	66.88	12.08
24-00	2	80.00	14.14	1	70.00	-----	3	76.67	11.55

*Note: Grades are based on a 100 point scale.

Analysis of Variance Table

Source	df	ms	F	Significance
Occupational				
Between	3	1202.0	8.48	.01
Within	283	141.6		
Total	286			
Liberal Arts				
Between	2	2440.0	19.94	.01
Within	349	122.4		
Total	351			
Combined				
Between	3	2749.0	21.02	.01
Within	636	130.8		
Total	639			

CHART 3.1:

1982 DRT/GRADE CORRELATION

OCCUPATIONAL COURSES

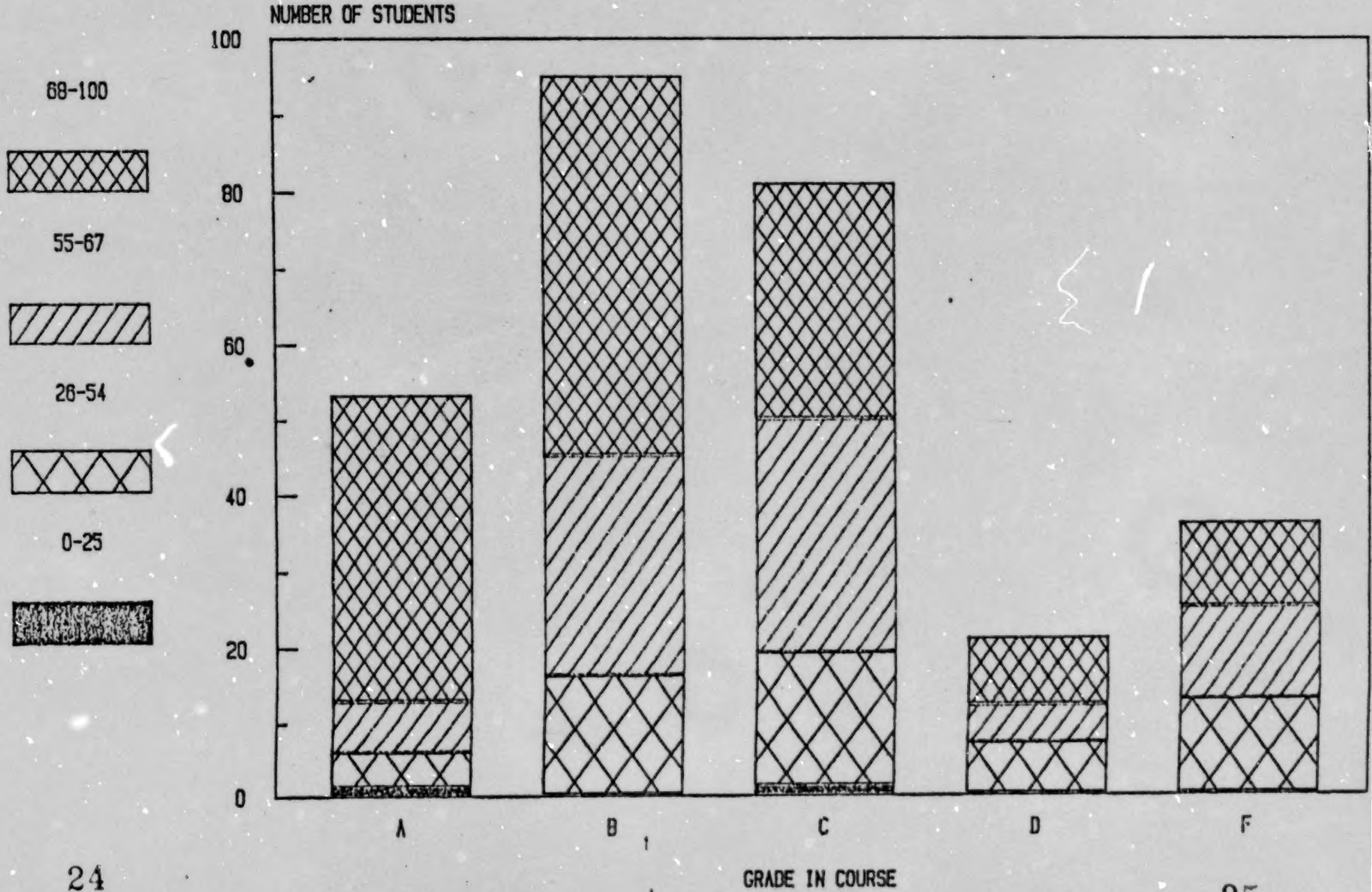


CHART 3.2:

1982 DRT/GRADE CORRELATION

OCCUPATIONAL/LIBERAL ARTS COMBINED

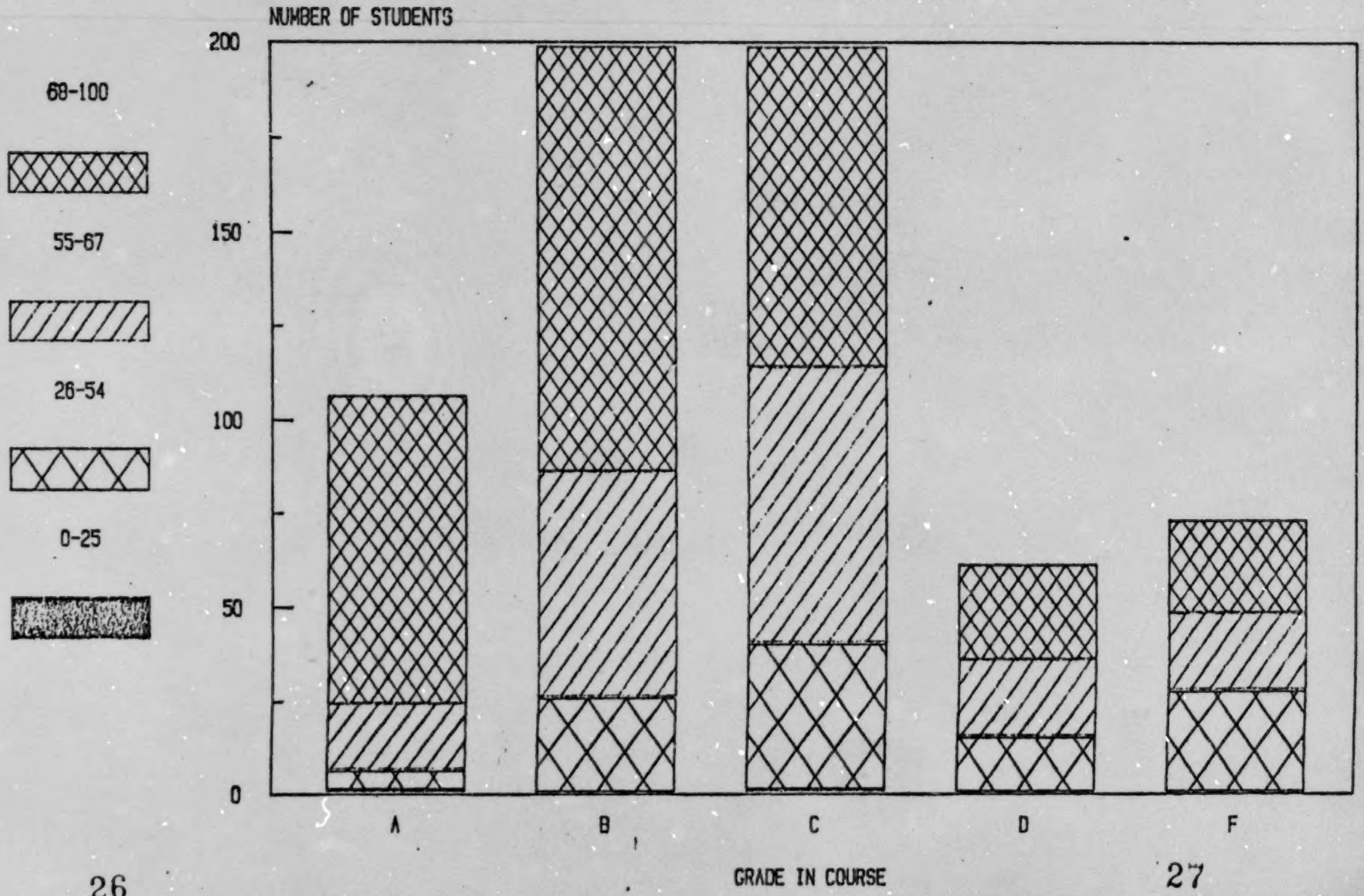


CHART 3.3:

1982 DRT/GRADE CORRELATION

LIBERAL ARTS COURSES

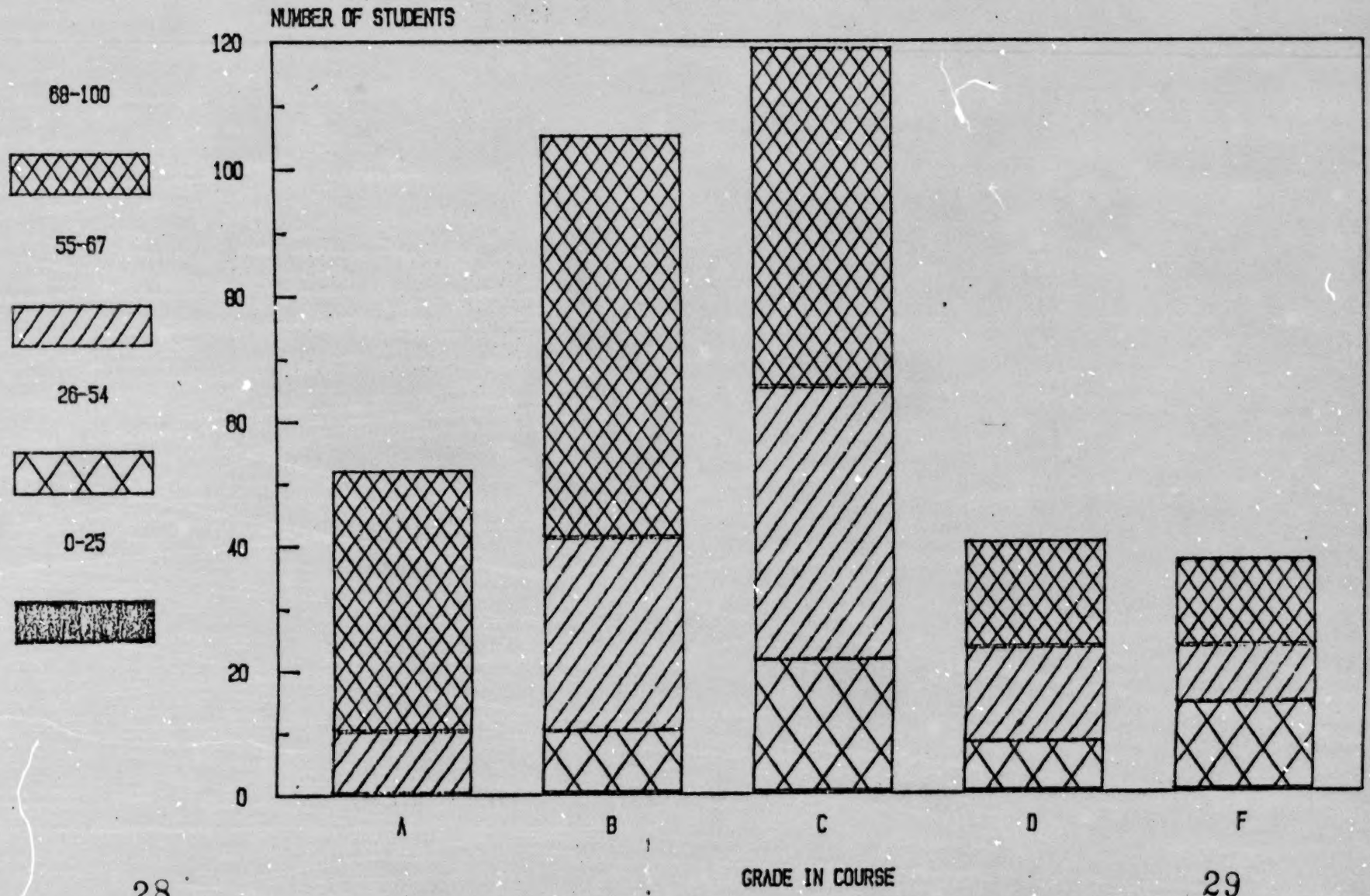
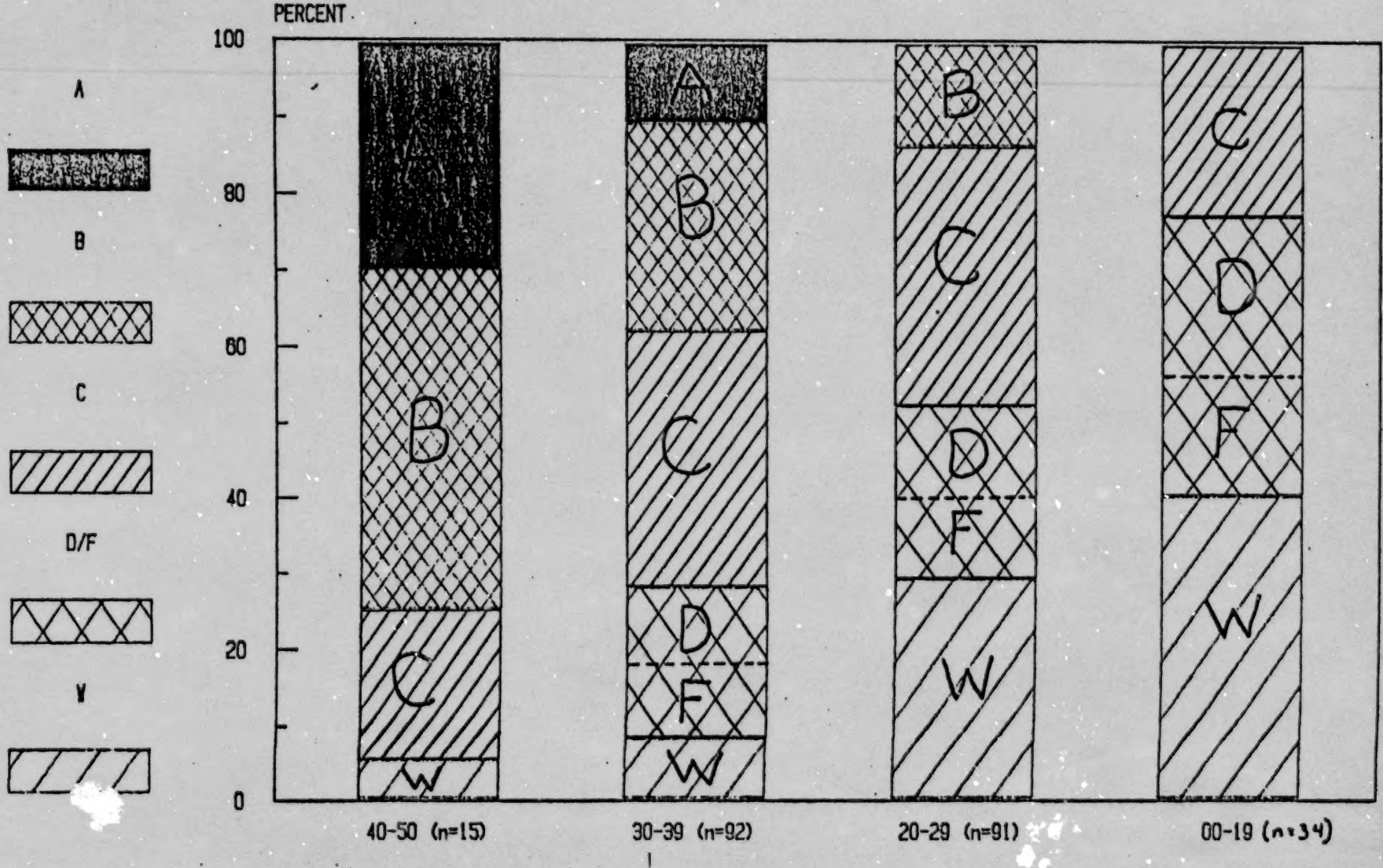


CHART 3.4:

DRT/SDRT/ASSET COMPARISON

PRE-ALGEBRA/GRADE CORRELATION



CHAPTER 4: Description of ASSET Class and Comparison with ACT Norms

The 350 subjects in the current study were volunteers, recruited primarily in August, 1983, at Santa Rosa Junior College. A few were added during the Fall semester. A majority of the subjects were incoming freshmen, but first and second semester students were also involved. A large majority of the subjects (313) were concurrently enrolled in Guidance 65, College Orientation. As a part of the course, students were given the DRT, SDRT, ASSET tests, and Santa Rosa Junior College math tests. They were also provided test interpretations and academic counseling. Finally, they were provided access to the Career and Study Skills Centers. The students were enrolled in the course as a way to ensure that supplementary services were provided to increase the effectiveness of the testing. They were also able to earn one unit as a result of their participation. A small number of subjects (17) chose to take the tests without enrolling in the course.

Part way through the Fall semester, test scores on a number of the students were sent to ACT as part of ACT's normative study. Results on the Language Usage, Reading, and Numerical tests were compared with those from students at fifty other two-year colleges, nationwide. Comparisons between Santa Rosa Junior College students and the other students are shown in Table 4.2, and relative percentages are shown in Charts 4.1, 4.2, and 4.3. As can be seen, mean scores for Santa Rosa Junior College students were higher than those of the normative sample for all three tests. Corresponding percentiles were also significantly greater from those of the normative group. The charts show that when the scores were broken down into the recommended placement scores from Table 2.2, Santa Rosa Junior College students again scored consistantly higher on all three tests. All of these results indicate that this sample of Santa Rosa Junior College students scored consistently higher than students in the normative sample on all three tests looked at. Although this says quite a bit about the skills of this group of Santa Rosa Junior College students, it also suggests that they were significantly different from the students in the normative sample. This may cast some doubt onto the validity of the results derived

from these tests, which will be discussed in the next chapter.

One last point about the subjects in this study needs to be made. Because participation was voluntary and a number of hours of testing and counseling was required, these students tended to be highly motivated. They expressed an interest in learning more about their skills and limitations, and put in the time necessary to get this information. This fact in itself may explain why they scored at a higher level on ASSET's three basic skills tests than the normative sample. The norms were established from a random sample of students. The Santa Rosa Junior College sample group is perhaps more motivated than randomly selected students.

TABLE 4.1: Comparison Between SRJC and Normative Sample Mean Scores

sample	n	mean score	std. dev.	percentile
Language Usage				
SRJC	202	46.51	9.50	59
Norms	26,612	43.16	9.69	45
Reading				
SRJC	201	29.23	7.62	68
Norms	26,413	24.49	8.59	50
Numerical				
SRJC	202	22.39	6.10	70
Norms	26,435	18.81	6.65	51

CHART 4.1:

COMPARISON OF SRJC AND NORMATIVE SAMPLE

ASSET LANGUAGE USAGE

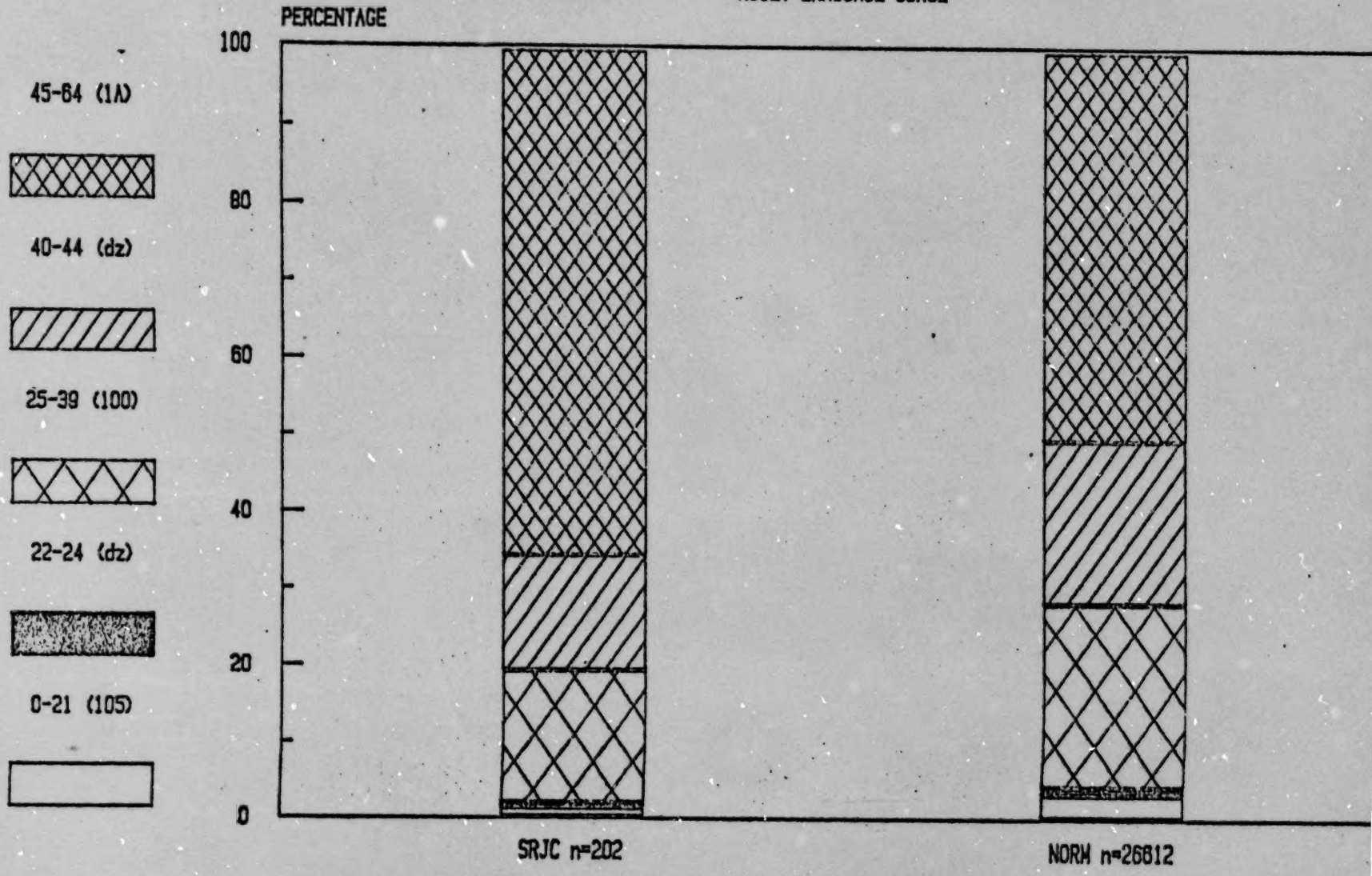


CHART 4.2:

COMPARISON OF SRJC AND NORMATIVE SAMPLE

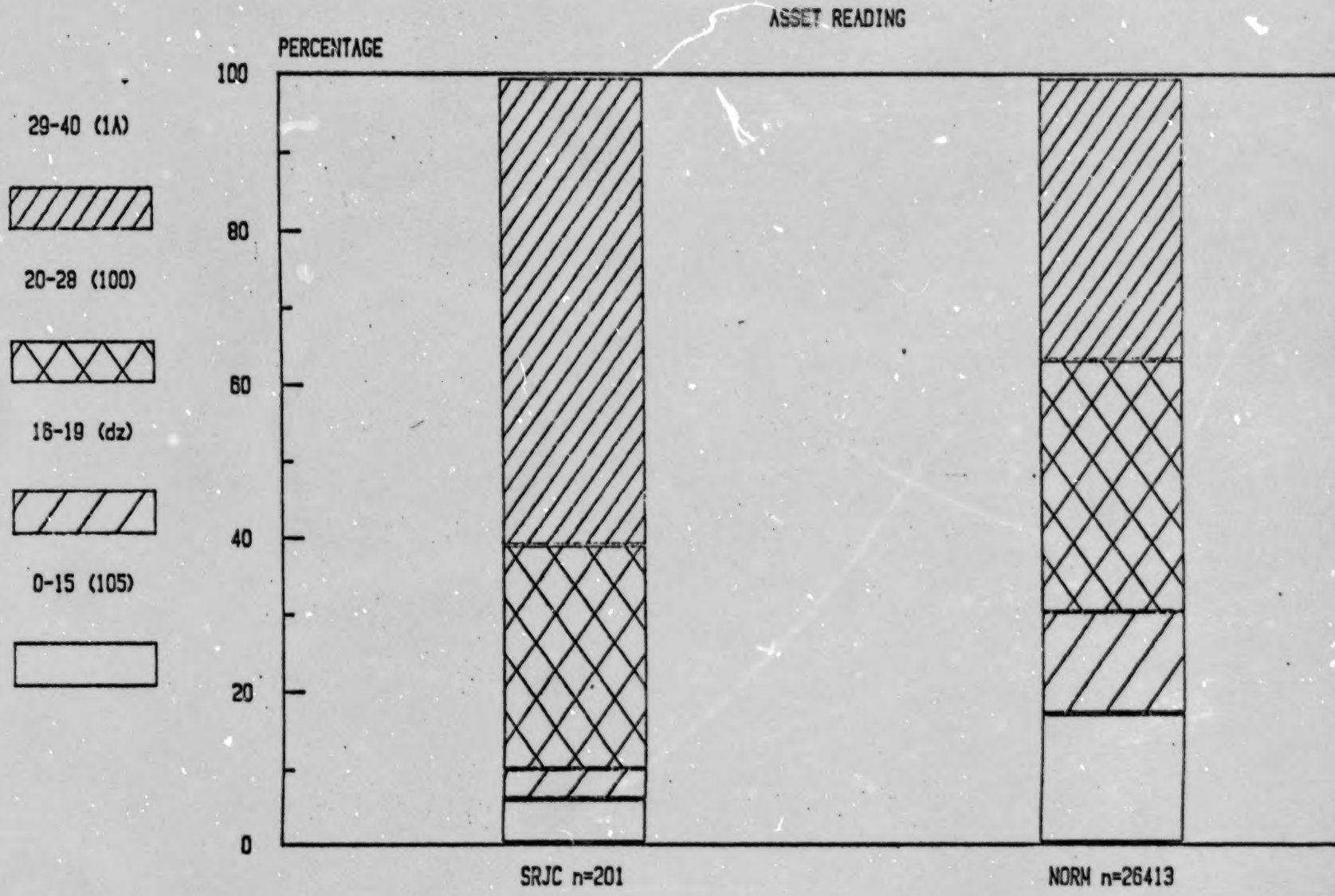
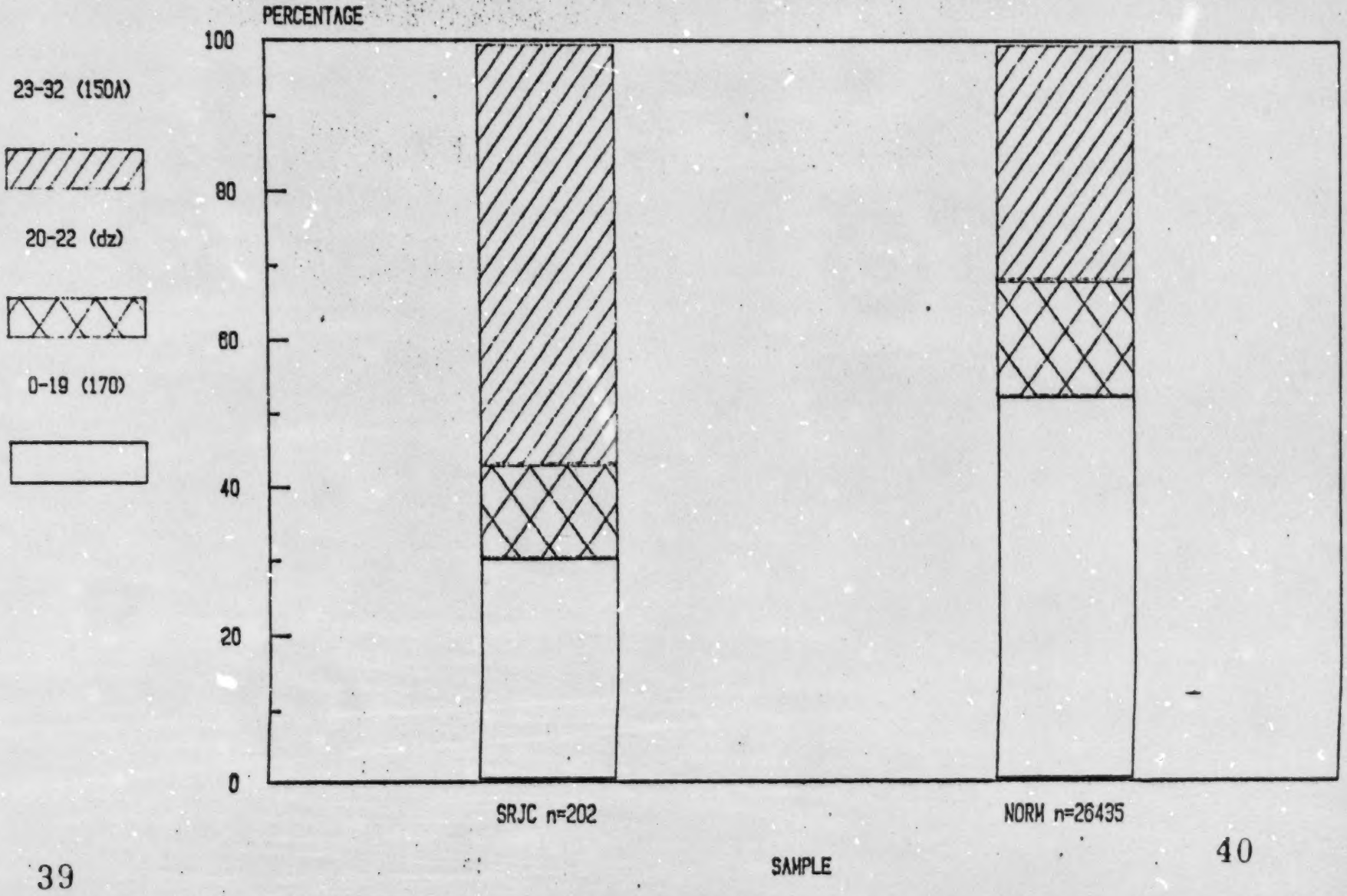


CHART 4.3:

COMPARISON OF SRJC AND NORMATIVE SAMPLE

ASSET NUMERICAL



Results

This study had two main objectives. First, the tests Santa Rosa Junior College currently uses for course placement (the DRT, the pre-Algebra test, and the pre-Calculus test) were compared with the ASSET battery of tests to determine whether the different tests measure similar skills. The DRT was also compared with the SDRT, a test used heavily by the Santa Rosa Junior College Reading Lab, to also determine whether the skills they measure are similar. The second objective of the study compared student DRT scores, pre-Algebra scores, pre-Calculus scores, and scores on the ASSET tests with final grades in nine separate courses. It was hoped that one of the tests would be found to be an accurate predictor of success in these courses.

Scores on the DRT were found to correlate significantly with scores on the SDRT (Table 5.1). This high correlation indicates that these tests measure similar skills, and that a student should score close to the same percentile on each. The significant correlations between scores on the DRT and scores on ASSET's Reading, Language Usage, and Advanced Language Usage tests also indicate that these tests measure similar skills. The higher correlation between the DRT and the Reading test, as compared to the Language Usage test, indicates that these tests measure similar skills. The higher correlation between the DRT and the Reading test, as compared to the Language Usage test, indicates that reading is probably the major skill measured by the DRT. Finally, the significant correlation found between scores on the DRT and students' GPA indicates that the DRT scores are reasonably accurate indicators of overall success in courses. All of these results are significant with less than 1% chance of error.

Scores on the Santa Rosa Junior College pre-Algebra test were found to correlate significantly with scores on the ASSET Numerical, Elementary Algebra, and Intermediate Algebra tests. Skills measured by the pre-Algebra test seem most similar to those measured by the Elementary Algebra test, due to the high correlation between scores on the two tests. Although the correlation between the pre-Algebra test

and the Intermediate Algebra test is also significant and high, it is hard to evaluate their relationship, due to the low number of students involved (13).

Scores on the Santa Rosa Junior College pre-Calculus test were found to correlate significantly with both the ASSET Numerical and Elementary Algebra tests. However, the correlations were relatively low (.55 and .49, respectively), indicating that the pre-Calculus test probably measures additional skills not covered by the ASSET tests. Unfortunately, only two subjects in the study took both the pre-Calculus and the ASSET College Algebra tests, so no correlation could be determined between the two.

Finally, the DRT was found to correlate significantly with both the pre-Algebra and pre-Calculus tests. Although this may indicate the necessity for reading skills in performing mathematics, it is probably more a result of good students being strong in both areas and poorer students having difficulities in both areas.

The second part of this study compared DRT scores, Santa Rosa Junior College math test scores, and ASSET test scores with student grades, to see whether any of the instruments predicted future success in the courses. Final grades in nine separate courses were looked at, and correlations between student grades and test scores were calculated.

No one test was found to be an accurate predictor of success in all nine courses (Table 5.2 and Chart 5.1). Different parts of the ASSET battery were found to correlate with course grades in different classes. However, no significant correlations at all were found between DRT scores and any course grades. The Advanced Language Usage test seemed to be the most accurate predictor, as it significantly correlated with grades in four of the nine courses. Reading scores correlated with grades in three courses, and Language Usage scores with grades in one course. Neither of the Santa Rosa Junior College Math tests showed significant correlations with grades. ASSET's Numerical test showed a significant correlation with grades in five courses and the Elementary Algebra test with grades in one course.

Discussion

One difficulty with trying to understand these data is the small number of subjects looked at in each class. Because the numbers are so small, a great deal of error may be included in the results. However, even with the small numbers, the results are surprising, particularly the lack of correlation between DRT scores and course grades. Past research has demonstrated the value of the DRT as a predictive instrument for Santa Rosa Junior College course grades (see Chapter 2 and Appendices B and C of this study). Also, the high correlations between the DRT and ASSET's Advanced Language Usage and Reading test scores would imply that for classes where these two ASSET tests correlated with course grades, DRT scores should also. However, this was not the case. Finally, as noted earlier, DRT scores showed a significant correlation with overall GPA, again indicating the DRT's value as a predictive instrument. These points all make it very difficult to understand why DRT scores did not correlate with specific course grades.

It is equally as difficult to understand why Santa Rosa Junior College Math test scores also did not significantly correlate with math course grades. Past studies by the Math Department have demonstrated the value of these tests as predictors (See Chapter 2). Also, the high correlation between the Santa Rosa Junior College pre-Algebra test and ASSET's Numerical and Elementary Algebra test scores make the lack of correlation difficult to understand.

A final point brought out in the previous chapter needs to be addressed here. The subjects in this study may not be a random representation of Santa Rosa Junior College students. They scored significantly higher on ASSET's three basic skills tests than did a normative sample from fifty other 2-year colleges. They also demonstrated more motivation than average students. If these subjects are not a random sample, then these results may not transfer well to other Santa Rosa Junior College students. They may not be valid for any other group than the particular subjects in this study.

TABLE 5.1: Test - Test Correlations

SRJC Test	Comparison Test	n	Correlation	Significance
DRT	SDRT	276	.724	.01
	ASSET			
	Reading	284	.720	.01
	Lang. Usage	284	.522	.01
	Ad. Lang Usage	252	.711	.01
	G.P.A.	284	.267	.01
Pre-Algebra	ASSET			
	Numerical	77	.447	.01
	El. Algebra	77	.670	.01
	Int. Algebra	13	.619	.05
	DRT	69	.308	.01
Pre-Calculus	ASSET			
	Numerical	15	.553	.05
	El. Algebra	15	.488	.05
	DRT	14	.494	.05

TABLE 5.2: Significant Test - Grade Correlations

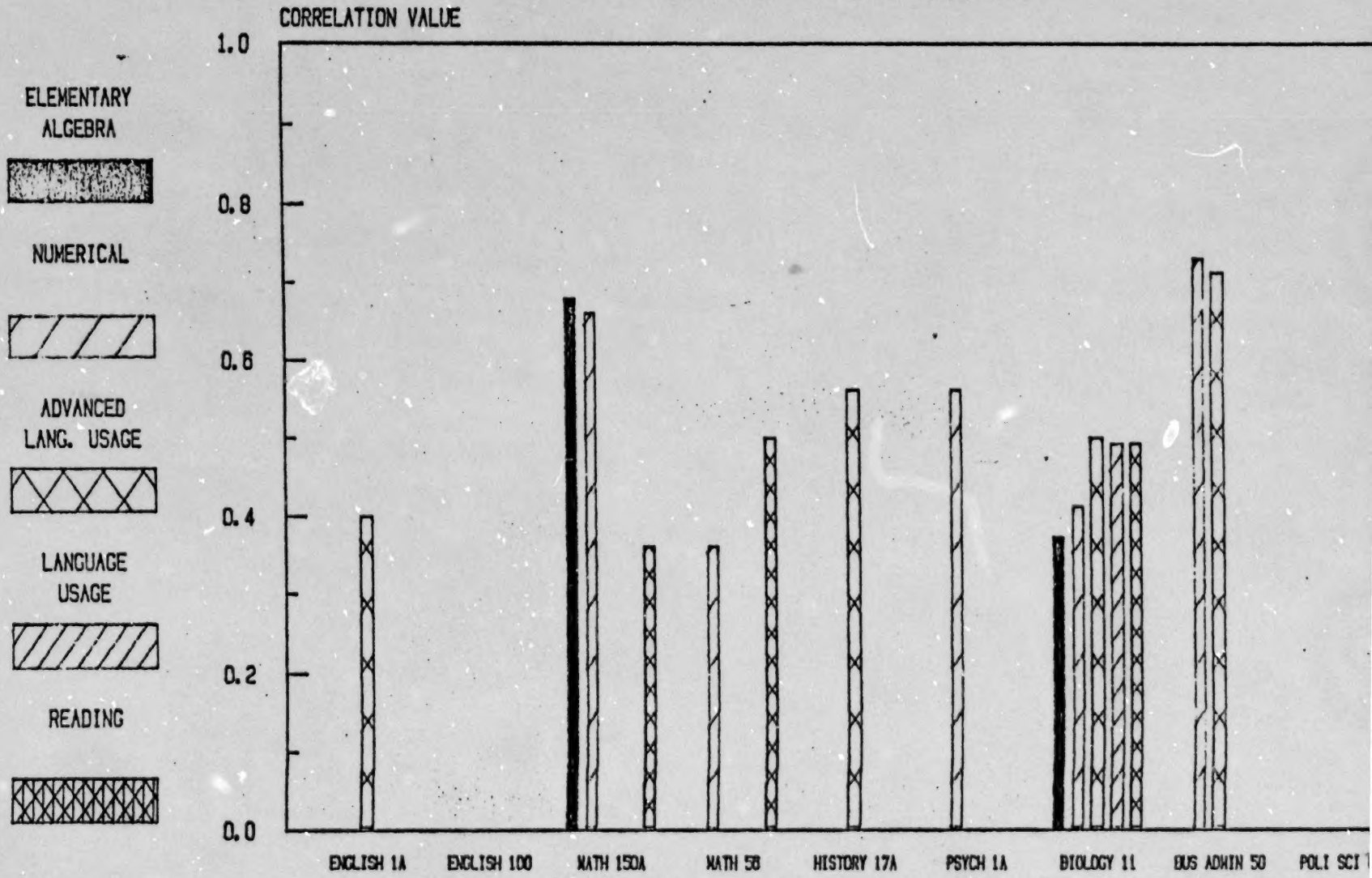
Course	Test	n	Correlation	Significance
English 1	Ad. Lang. Usage	28	.40	.05
English 100		22	none	
Math 150A	Numerical	36	.66	.01
	El. Algebra	36	.68	.01
	Reading	36	.36	.05
Math 56	Numerical	29	.36	.05
	Reading	29	.50	.01
History 17A	Ad. Lang. Usage	11	.56	.05
Psychology 1A	Numerical	30	.41	.05
Biology 11	Reading	29	.49	.01
	Lang. Usage	29	.49	.01
	Ad. Lang. Usage	28	.50	.01
	Numerical	29	.41	.05
	El. Algebra	29	.37	.05
Bus. Admin 50	Ad. Lang. Usage	12	.71	.01
	Numerical	12	.73	.01
Poli. Sci. 60		15	none	

*Note: There were no significant correlations between grades and DRT scores nor between grades and SDRT scores for any of the courses.

CHART 5.1:

DRT/SDRT/ASSET COMPARISON

SIGNIFICANT TEST-GRADE CORRELATIONS



Note: DRT and SDRT scores did not correlate significantly with any course grades.

CHAPTER 6: The Role of Counselor Recommendations

The final piece that needs to be looked at, when considering predicting student success in courses, is counselor recommendations. There is an assumption that by undergoing placement testing and discussing these results with a counselor, a student should be able to choose courses in which they can succeed. The final part of the current study, then, was to compare student grades in courses recommended by counselors with grades in courses not recommended, to see whether either group had more success.

The clearest way of looking at the data was to define success in five separate ways: students receiving at least a C; students receiving at least a D; students receiving at least a C or a Cr; students receiving at least a D or a Cr; and students receiving a grade equal to or higher than their overall GPA. This last category allowed comparison of student performance with their own demonstrated capabilities, rather than with those of other students.

The results obtained from comparing these percentages all showed students taking recommended courses to have a higher rate of success than those taking non-recommended courses (Chart 6.1). However, the level of significance for these differences varied greatly among the five groups (Table 6.1). The differences between students receiving A-C or A-D in recommended vs. non-recommended courses was significant at a 0.10 level. This indicates that there is a 10% chance that these results are due to error. This is a fairly high chance of error and leaves these results somewhat in doubt. For students receiving A-C or Cr, or A-D or Cr, the differences between the two groups are significant at 0.01, or a 1% chance of error. This obviously is a much stronger finding, and underscores the value of counselor recommendations. Finally, when looking at students scoring at or above their own GPA, the difference between the groups was found to be significant at the 0.05 level, a 5% chance of error. This also is a statistically strong result, and gives added support to the value of counselor recommendations.

It is somewhat difficult to understand the meaning of these results without considering students' motivation in choosing non-recommended courses. Were they searching for easier classes; were all of the recommended classes closed; or did they choose to attend courses their friends were taking? The reason these students chose a non-recommended course may have had a lot to do with their eventual success or lack thereof. However, students taking recommended courses did achieve greater percentages of success in all five areas than did those taking non-recommended courses. This in itself says a lot, and when all the possible motivations for taking non-recommended courses are considered, these results seem to be a strong confirmation of the value of counselor recommendations in promoting student success.

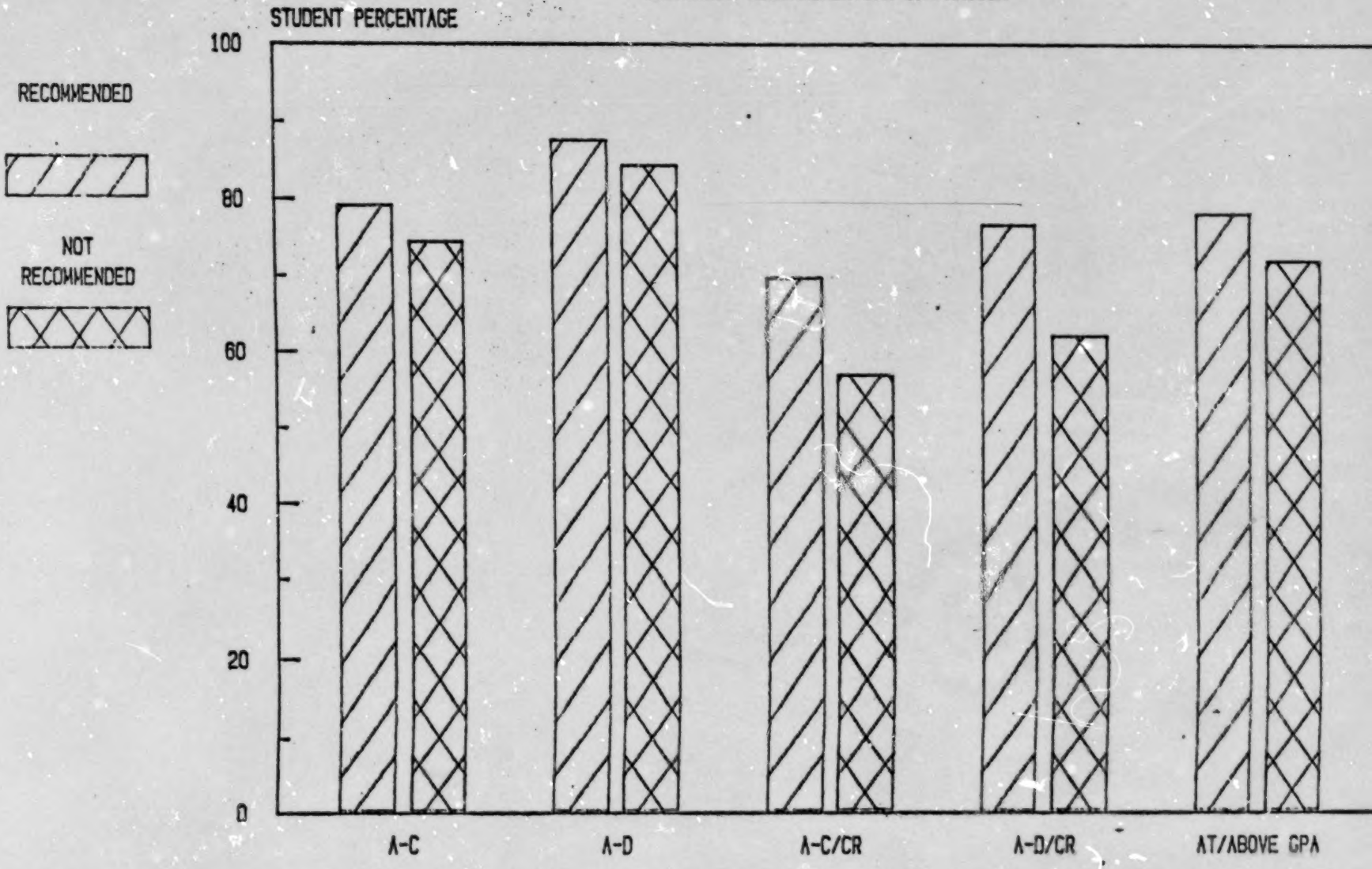
TABLE 6.1: Comparisons of Success in Recommended vs. Non-Recommended Courses

	A-C	Total n	%	Sig.
Recommended	298	376	79	.10
Non-recommended	208	279	75	.10
	A-D			
Recommended	330	376	88	.10
Non-recommended	235	279	84	.10
	A-C+Cr			
Recommended	318	457	70	.01
Non-Recommended	297	522	57	.01
	A-D+Cr			
Recommended	350	457	77	.01
Non-recommended	324	522	62	.01
	At/above GPA			
Recommended	291	376	78	.05
Non-recommended	201	279	72	.05

CHART 6.1:

MATRICULATION STUDY

COUNSELOR RECOMMENDATION COMPARISON



CHAPTER 7: Summary and Conclusion

The objectives of this study were two-fold. First, placement test scores and student grades were compared to see whether any one instrument proved to be an accurate predictor of success. Counselor recommendations were also looked at as important success indicators. Secondly, the current placement tests used at Santa Rosa Junior College (The DRT and the pre-Algebra and pre-Calculus tests) were compared with the ASSET battery of tests, to see whether they measure similar skills. Past research on the DRT and the math tests was also looked at.

Results were inconclusive. Past research has demonstrated the DRT, the pre-Algebra test, and the pre-Calculus test as reliable predictors for student success in a number of courses. Past results have been so conclusive in fact, that these tests are used as the basis of most placement decisions at Santa Rosa Junior College. However, in the current study, none of these tests produced scores that correlated with final grades in any of the nine courses surveyed. This was particularly surprising in light of the fact that the DRT and both Math tests showed significant correlations with a number of the ASSET tests.

Two possible reasons for the descrepancies were brought out. Although the overall sample size of 350 was fairly large, sample sizes in the individual courses were small; small enough that a great deal of error may have influenced the results. In fact, correlation coefficients found between DRT scores and grades in a number of courses would have been at significant levels if the sample size were greater. The second difficulty discovered was that the sample used may not have been a good representation of Santa Rosa Junior College students. Subjects in this sample scored significantly higher than students from fifty other two-year colleges, and showed more interest and motivation in assessing their skills than average students show. Both of these factors indicate that the results of this study may not transfer well to Santa Rosa Junior College students as a whole.

Although there were serious limitations with the sample of students used in this study, it is hard to overlook the conclusions derived from it. Neither the DRT, the pre-Algebra test, nor the pre-Calculus test provided scores that correlated significantly with student course grades. This was the exact opposite result than was expected. Because placement procedures at Santa Rosa Junior College are so heavily dependent on these three tests, more research may be needed to determine whether the results of this study are, indeed, accurate. At the least, other factors besides scores on these three tests should also be considered when placing students into courses.

APPENDICES

APPENDIX A: Assessment Office Presentation
to SRJC Board of Trustees

APPENDIX A: Assessment Office Presentation to SRJC Board of Trustees

The Assessment Office orders, administers, scores, and interprets over twenty separate tests and instruments. The great majority of these are used either for Course Placement and Program Screening or for Career Guidance. Tests are given to new and continuing students, students enrolled in Guidance courses, students applying to specific programs such as Psychiatric Technician or LVN, potential students such as current high school students, and community members referred by outside agencies. The Assessment Office is open year-round, and provides a significant part of its services in the late summer.

One of the main functions of the Assessment Office is providing placement testing for all English and Math courses. The Diagnostic Reading Test (DRT) is used to place students into English 1A, 100, 105, or 107, depending on their skill level. This test has been used here for over 10 years and in the past 12 months, nearly 4000 have been given (Table I). Although most SRJC students take this test for English placement, English scores on the Scholastic Aptitude Test (SAT) and the ACT Assessment Test (ACT) can be substituted.

Students wishing to take either an Algebra or a Calculus course have been able to take Math placement exams through the Assessment Office to determine whether they have the skills required for success in the courses. These tests were designed by the SRJC Math Department, and have proven to be valuable enough to be mandatory for all advanced Math courses in the Fall. In the past year, the Assessment Office has administered over 1500 Math tests (Table I).

Career Guidance testing is also a large part of the Assessment Office's concerns. Interest, Aptitude, Personality, and Study Skills testing is provided and scored. The results are passed on to Counselors and Career Center staff to help students in program planning and vocational concerns. Career Guidance testing has accounted for over one-half of all testing done through the Assessment Office during the past year. (Chart I).

One final note about the tests used is that they pay for themselves. Students are charged a nominal fee for all tests except Math placement. These fees range from 50¢ to $4.25, depending on the complexity of the test. Community members not enrolled at SRJC are charged an additional $5.00. The tests' ability to pay for themselves may well end with the advent of tuition in the Fall.

Although SRJC students are the main users of Assessment's services, a number of other groups are also tested (Chart II). Along with students entering for the first time and continuing students, students enrolled in short-term

Guidance classes are administered a series of placement, interest, and aptitude tests. The purpose of these classes is to prepare the students for their first, full semester here, and accurate assessment is a big part of this process. Potential students are also users of SRJC's testing services, especially students in local high schools. Towards the end of each semester, testers go out to the schools to assess their students' skills and interests, in order to help prepare them for enrolling at SRJC. A number of local high schools are involved in this program (Table II). Students applying to certain SRJC programs are also tested before their applications are approved and accepted. These include Psychiatric Technician, LVN, Dental Assistant, Electronics, and the Basic Academy. Finally, SRJC's Assessment Office is also used as a referral source for community members. Referrals come from such diverse sources as Santa Rosa EDD, San Rafael EDD, Sonoma County Mental Health, Korbel Winery, and Hewlett-Packard. The Assessment Office is also used as a contact and information source for people interested in taking the SAT, ACT, GRE, and TOEFL tests, all of which are given at Sonoma State University.

Although the Assessment Office is open year round, there are some periods that the testing load peaks. (Chart III). In August, one-fourth of all the testing is done, as students take placement tests before registering for Fall classes. January sees more placement testing and a rise in interest testing. March and April are used for much of the high school testing and some Guidance courses. Finally, May is another heavy period, with a number of Guidance courses taking place.

The past three years have seen an immense growth in the Assessment Program. The number of tests given has tripled (Chart IV). Placement testing has more than doubled, and Career Guidance testing has increased threefold. As assessment becomes more effective, the demand for it by Departments, Counselors, and Students is increasing greatly.

Along with more tests being given, the Assessment Office is expanding in other areas as well. An Assessment Advisory Committee has been formed to help plan the growth of our services (Table III). We have become a member of the Learning and Retention Consortium, made up of members of other Community Colleges, as a way of helping to influence the overall growth of testing and assessment throughout the State. Finally, we have begun emphasizing research on our tests and measuring how well they predict success in SRJC courses.

A major step towards this type of research was accomplished this past year through a Statewide Improvement of Instruction Grant. Through these funds, we collaberated with ACT to measure the effectiveness of the ASSET battery of tests as a placement tool. This was contrasted with the DRT and Math tests we are currently using to see which would better predict success in a number of courses (Chart V). Nearly 350 students were involved in the study, and the results are currently being tabulated. A full copy of these results and a summary of the study will be sent to Board Members later this month.

The students were enrolled in a Guidance 65 course so that they could obtain credit for their involvement. They were then given 4 hours of testing and provided interpretation of their scores by Counselors. Their test scores were then compared with DRT and Math scores, and all tests were compared with final grades in a number of Liberal Arts courses. Preliminary results seem to indicate that the DRT and Math placement tests we are currently using are the most effective instruments for predicting success at SRJC classes. Another interesting finding from this study is the fact that SRJC students performed significantly better than students from over 20 other Community Colleges nationwide on tests of language usage, reading, and numerical ability.

Using this model, we have also done studies [illegible] the DRT as an effective predictor for success in Earth Science 12 and Consumer and Family Studies 62. We have also received requests for similar studies from the Administration of Justice and Business Departments. Finally, we are currently concluding a joint study with the Reading Lab looking at improvements in course grades as a result of reading assistance.

Our work in research during the past year has enabled us to develop a model for studying assessment instruments, evaluating their effectiveness, and developing predictive statements for testing levels needed for success in specific courses. With the overall emphasis on accurate and effective Matriculation being placed Statewide on Community Colleges, this type of research model will be invaluable for SRJC in future years.

TABLE I
AMOUNT OF TESTS GIVEN 1983-1984

Test Placement	Amount
DRT	3,735
Pre-Algebra	1,207
Pre-Calculus	364
LVN/Psych. Tech.	148
Career Guidance	
Interest	2,744
Aptitude	1,593
Personality	323
Study Skills	1,050

TABLE II
SONOMA COUNTY HIGH SCHOOLS TESTED BY SRJC 1983-1984

Analy
Cardinal Newman
Cloverdale
Geyserville
Healdsburg
Montgomery
Piner
Rancho Cotate
Ridgeway
Santa Rosa
Sonoma
Tomales
Ursuline

Those Tested by Petaluma Center:

Casa Grande
Petaluma
Novato Students

TABLE III
ASSESSMENT ADVISORY COMMITTEE

Dean of Student Services	- Ken Holback
Assoc. Dean of Instruction	- Ed Buckley
Assoc. Dean of Occupational Education	- Henry Gronroos
Asst. Dean of Admissions & Records	- Jim Menzel
Asst. Dean of Counseling	- Evelyn Pollard
Math Dept. Representative	- Amber Steinmetz
English Dept. Representative	- Bob Duxbury
Occupational Education Representative	- Tom Power
Liberal Arts Representative	- Phil Forester
Student Representative	- Gregg Varozza

Additional Resource Personnel

Learning Skills	- Sharon Rivkin
Vocational Skills	- Sue Weeden

CHART I

ASSESSMENT SUMMARY

TESTING INVENTORY

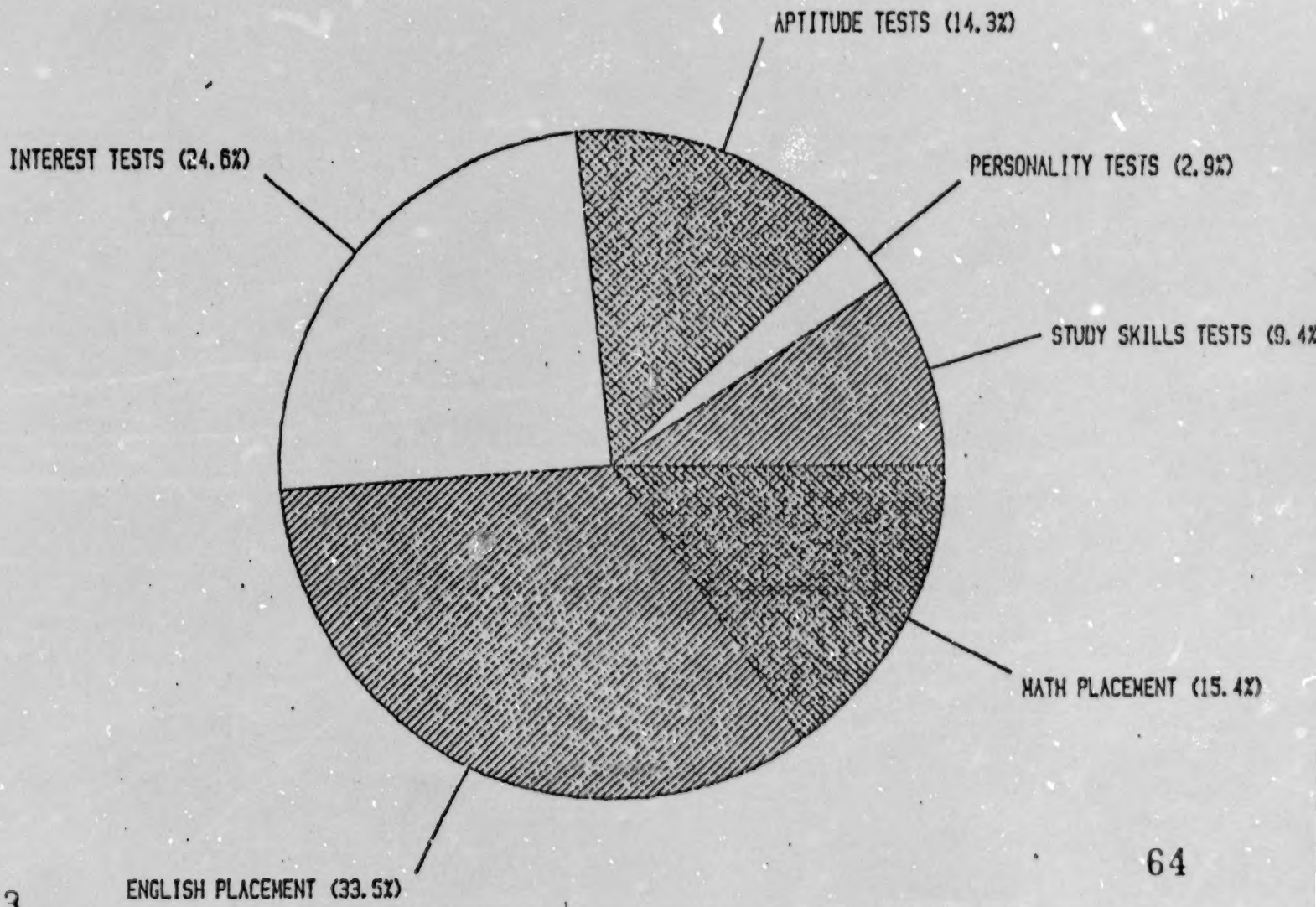


CHART II

ASSESSMENT SUMMARY

TESTING SUBJECTS (Estimated)

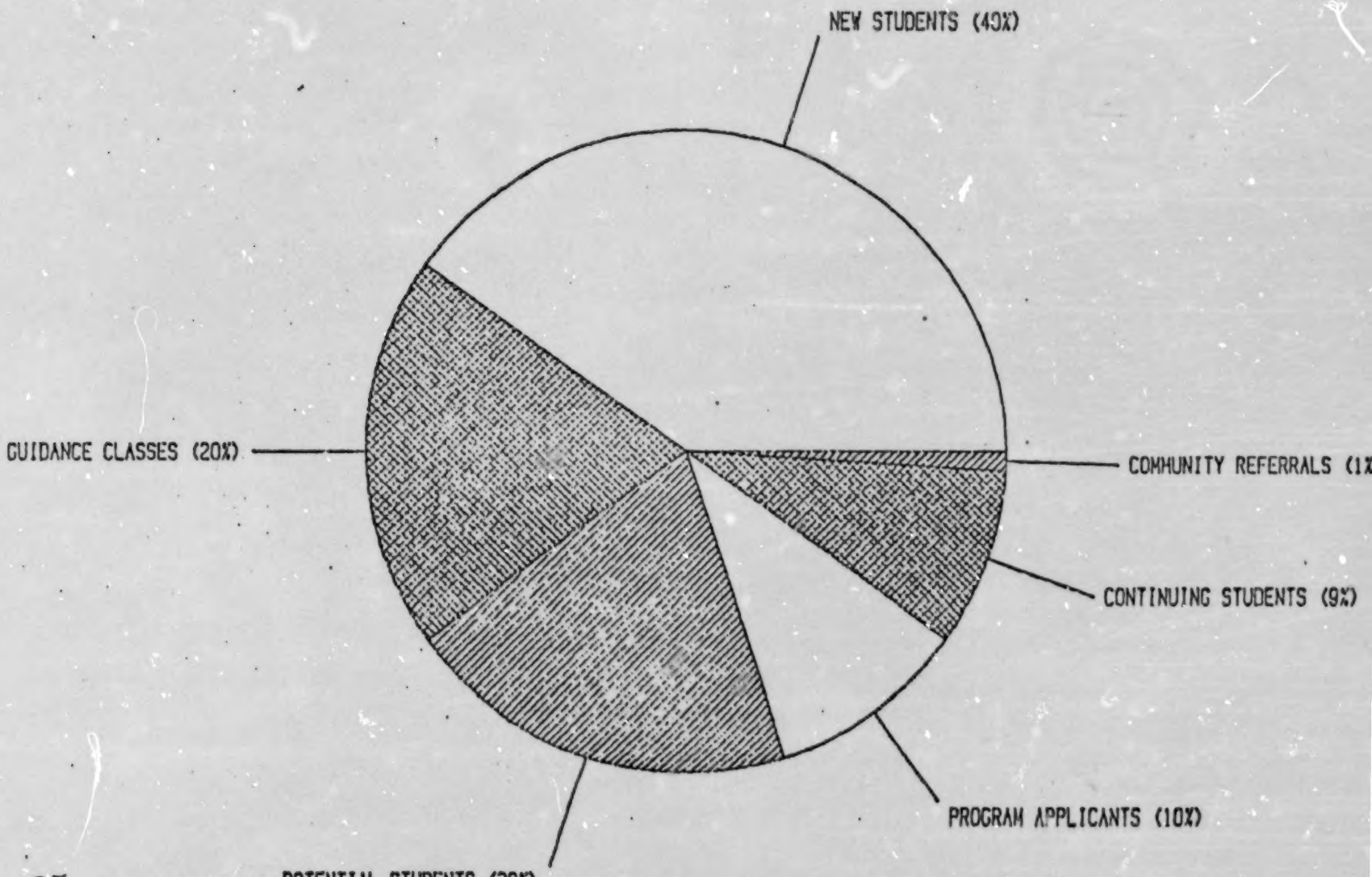


CHART III

ASSESSMENT SUMMARY

TESTING CALANDER

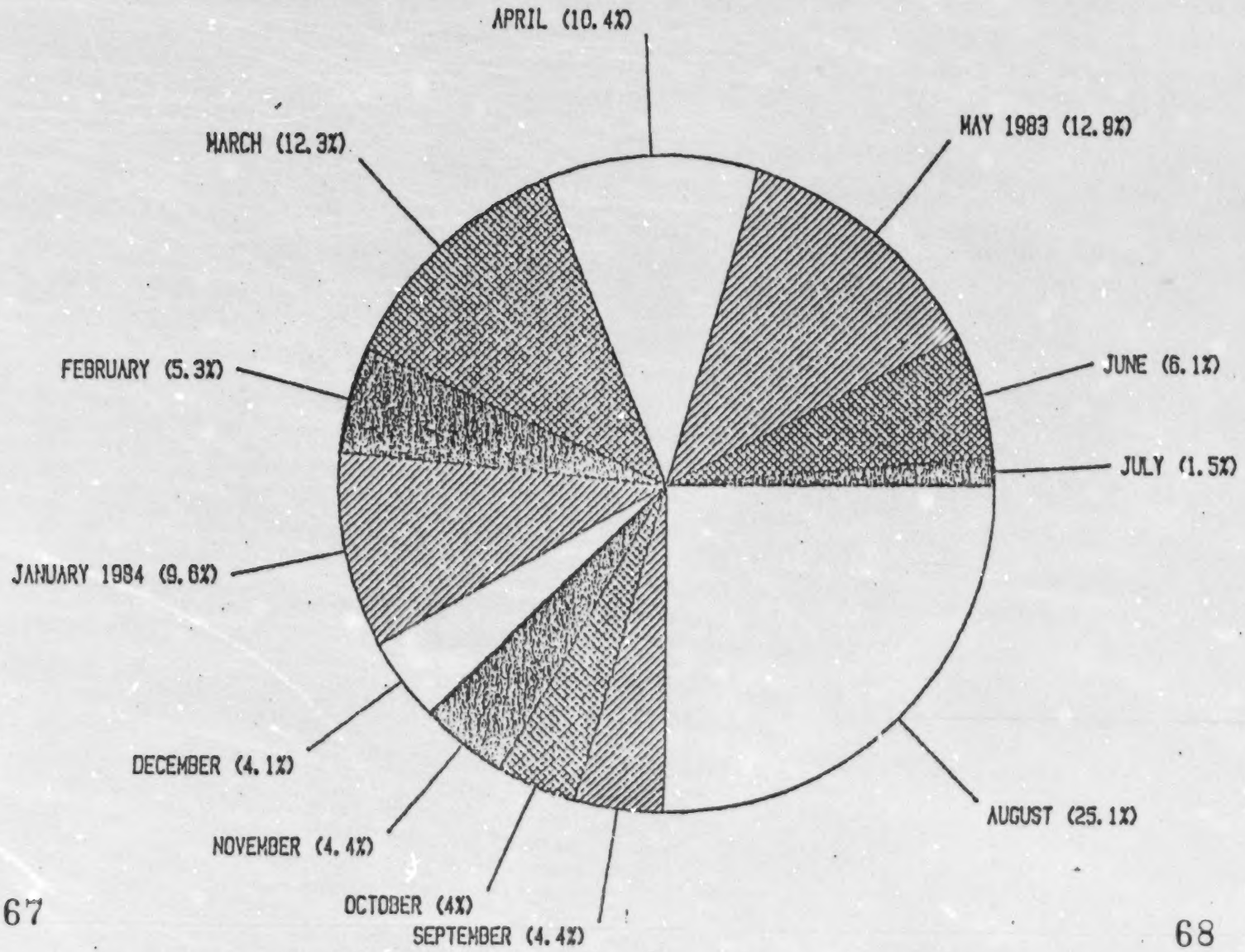
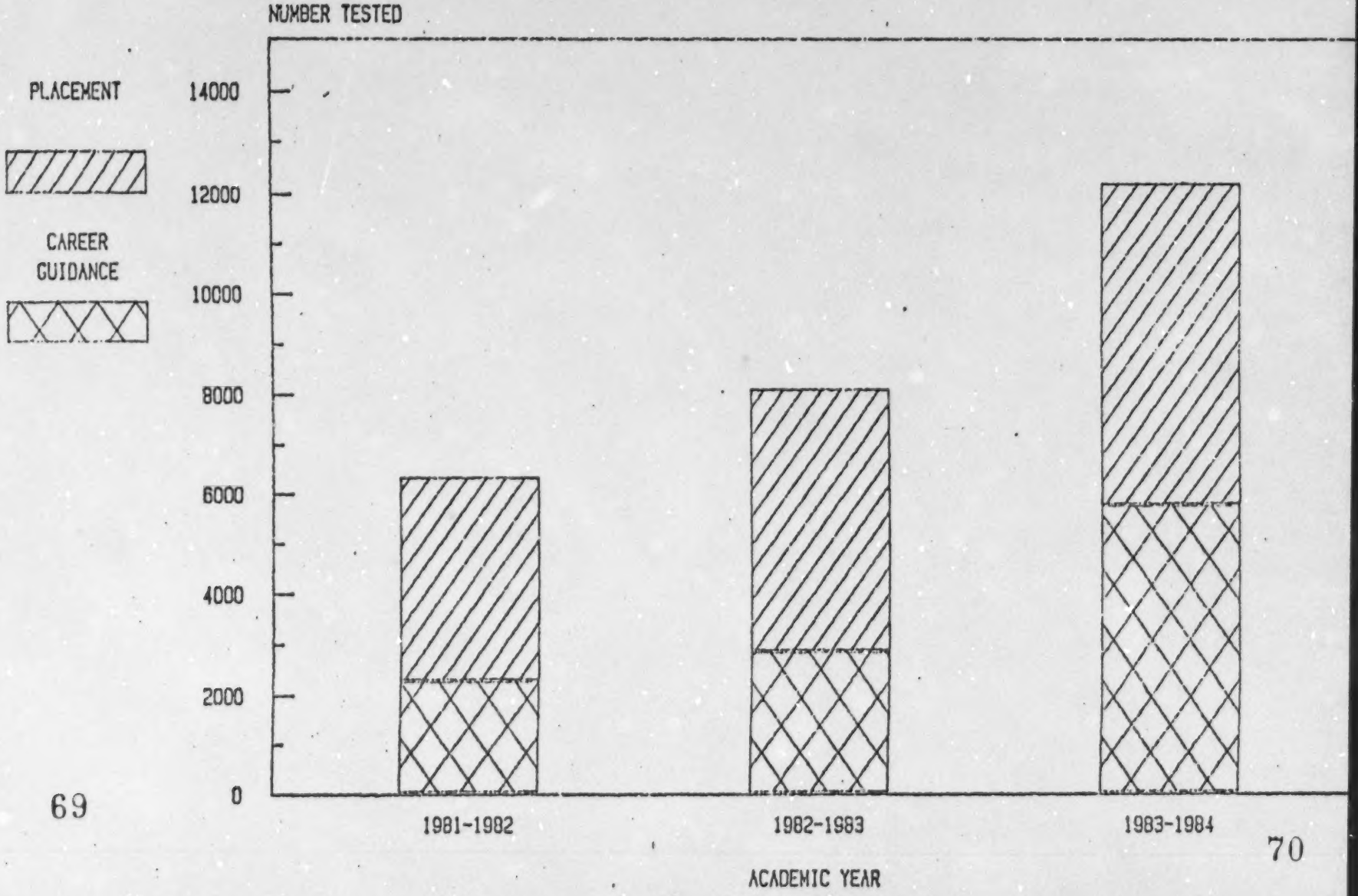


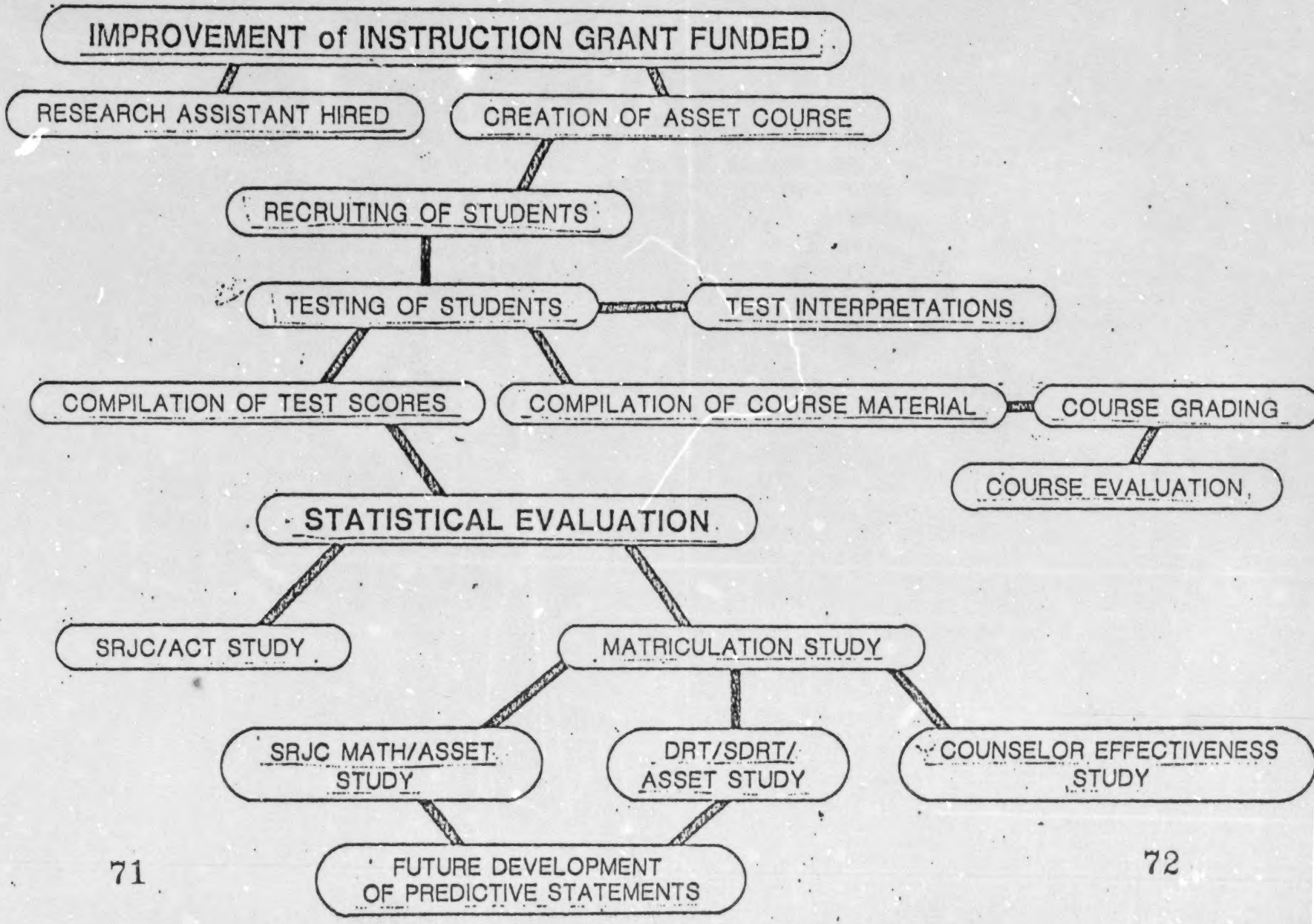
CHART IV

ASSESSMENT SUMMARY

TESTING TOTALS



ASSET PROJECT SUMMARY CHART



APPENDIX B: Consumer and Family Studies 62 Study

When looking at grades for students enrolled in CFS62 in both Fall, 1982, and Spring, 1983, strong positive correlations were found between students' grades and their DRT scores. Correlation was found between grades and test scores for each semester and for the two semesters combined. (See Table 1). These correlations became even stronger when students withdrawing from the class were eliminated from the study. The correlation was higher for the Spring class, but correlations for each of the classes and for the two classes combined were all significant with less than 1% chance of error.

Using an analysis of variance, significant differences were found between mean DRT scores for each grade level (See Table 2). Again, these differences were greatest for Spring students and were significant with less than 1% chance of error.

These results all indicate that the DRT was a valid predictor for grades in CFS62 for these two semesters. On the whole, the higher a student's DRT, the better they performed in the class. However, the large amount of variation in the scores indicate other factors also contributed. When looking at the range of scores for each grade, it can be seen that Spring students receiving an A scored as low as 44 on the DRT, and that Fall students failing the class scored as high as 85 on the DRT (See Table 2). Obviously, then, there is no single DRT score that all passing students score above and all failing students score below. Other factors involved could include outside work in the Reading Lab, tutorial help, and overall motivation for those succeeding with low test scores. Lack of motivation is probably the main factor affecting failing students with high DRT scores.

In summary, the results from this study indicate that the DRT was a good predictor for success in CFS62 for both the Fall, 1982, and Spring, 1983, semesters. Students scoring higher on the DRT tended to do better in the class. Exceptions to this may have been influenced by help at the Reading Lab, tutorial assistance, overall motivation, or other unknown factors. It is very difficult from these results to set a cut-off score on the DRT to predict success in CFS62. However, when looking at mean scores for the different grades, it if fairly safe to say that students scoring below the mid-50's on the DRT had greater difficulty on the whole in this course than those scoring above 60.

TABLE 1: Correlation Coefficients
For DRT vs. Grades

Sample	Number	Correlation	Significance
Fall '82, total students	157	.27	<.01
Students receiving A-F	107	.46	<.01
Students withdrawing	50	---	----
Spring '83, total students	95	.30	<.01
Students receiving A-F	59	.43	<.01
Students withdrawing	36	---	----
Both semesters combined Students receiving A-F	166	.45	<.01

TABLE 2: Mean DRT Scores And
Analysis of Variance

	Fall '82				Spring '83			
	n	mean	std dev	range	n	mean	std dev	ran
A	25	74.2	9.9	92-58	12	72.5	15.4	96-
B	34	67.2	10.8	88-37	25	66.8	10.5	92-
C	30	54.4	11.3	72-27	14	63.3	11.8	79-
D	3	54.6	8.5	63-46	1	61.0	----	61
F	15	57.7	15.1	85-37	7	51.6	18.5	78-

Analysis of Variance Table

Fall

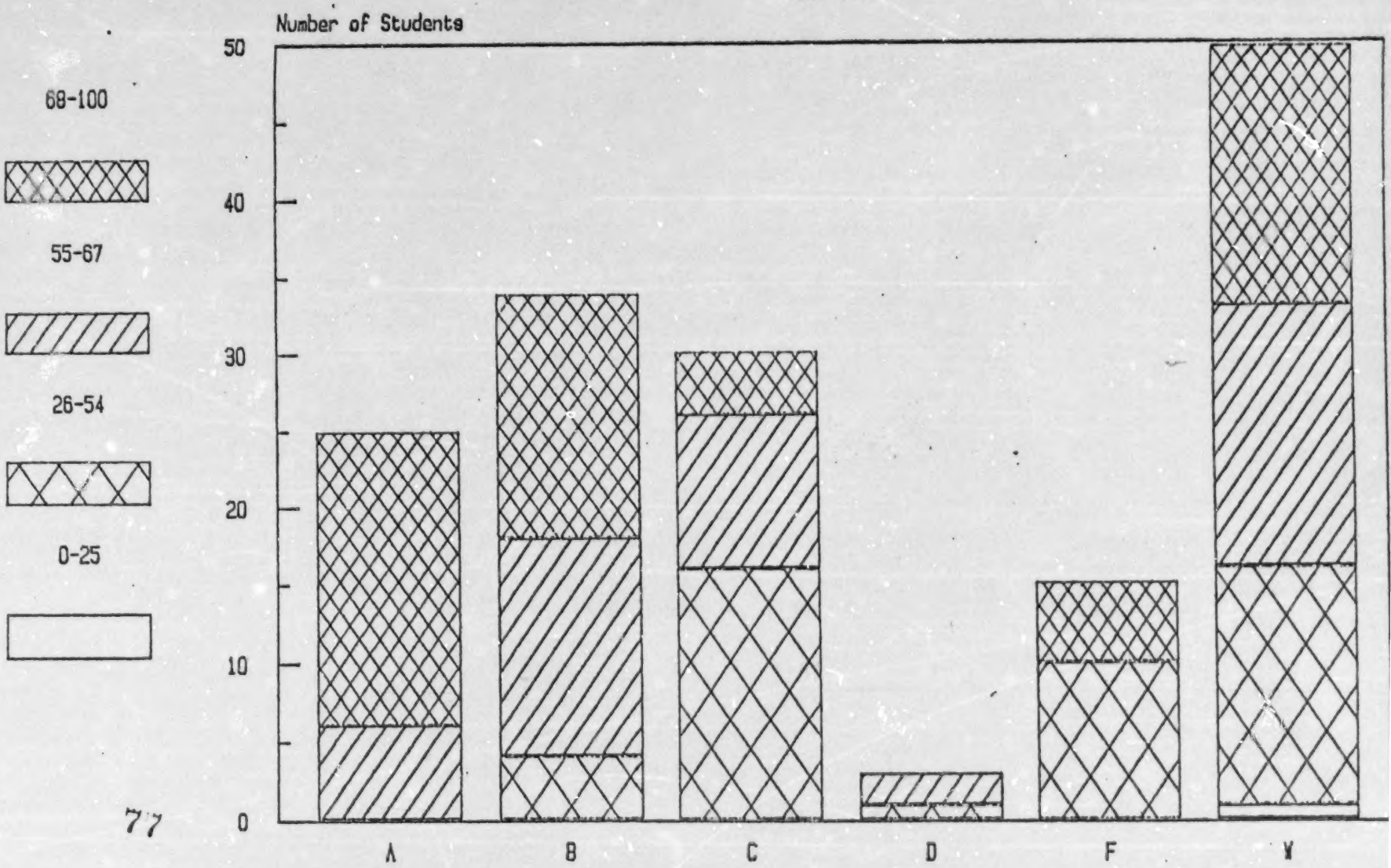
Source	df	ms	F	Significance
Between	4	1640.0	12.57	<.01
Within	102	130.5		
Total	106			

Spring

Between	3	666.0	3.97	<.01
Within	55	167.5		
Total	58			

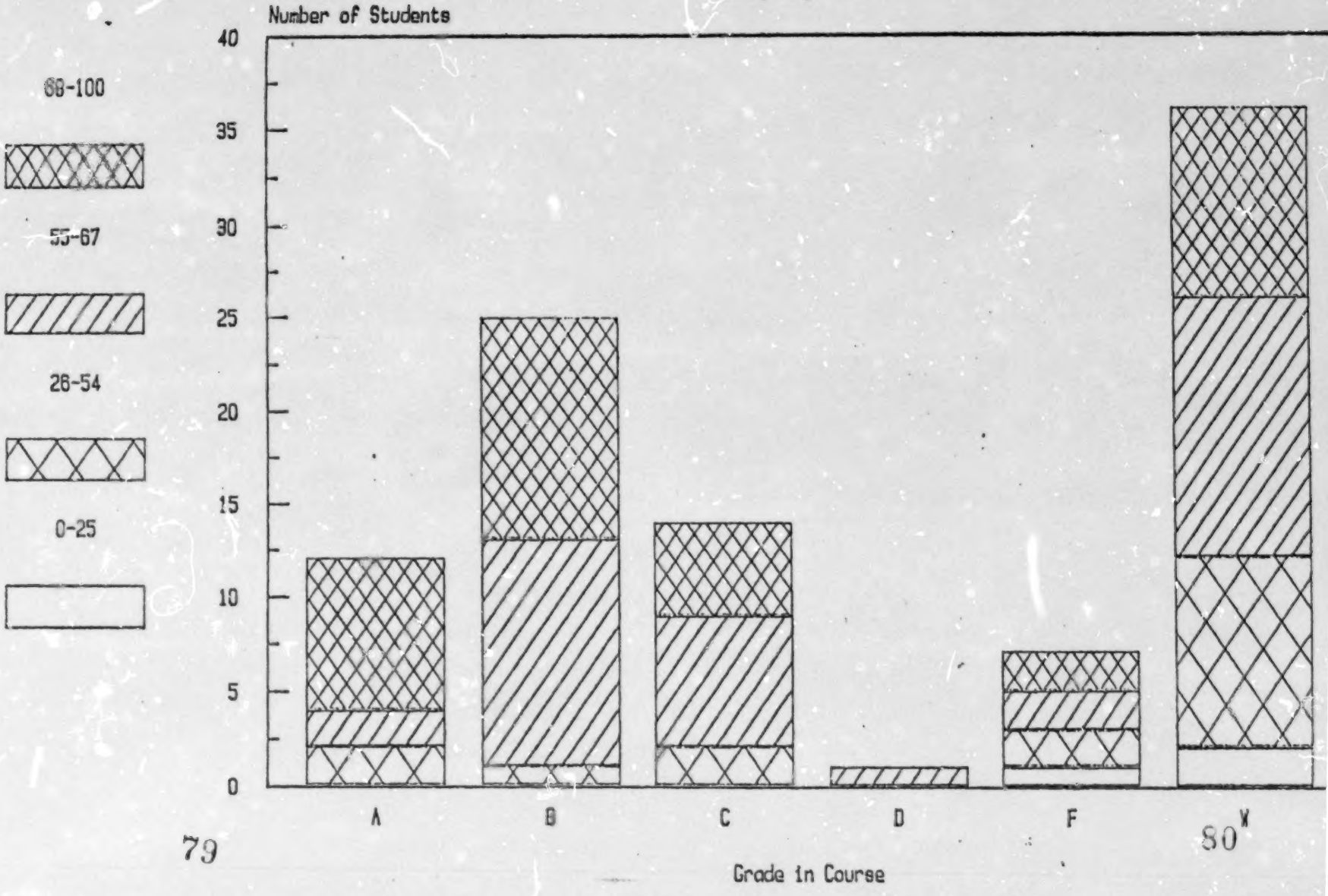
DRT/Grade Correlation: CFS62

Fall 1982



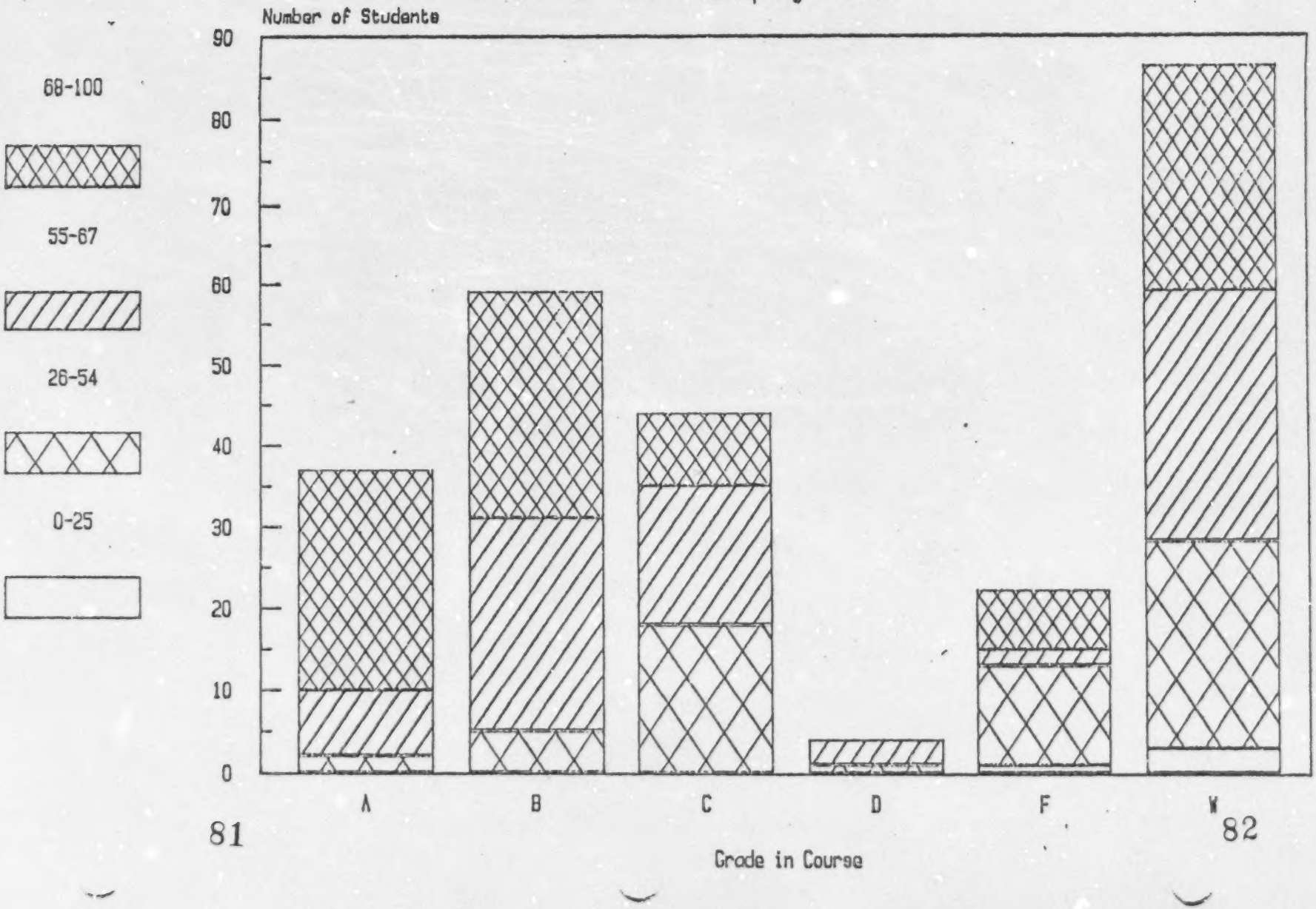
DRT/Grade Correlation: CFS62

Spring 1983



DRT/Grade Correlation: CFS62

Fall 1982, Spring 1983 Combined



APPENDIX C: Earth Science 12 Study

This study was designed to compare student test scores with their final grades in Earth Science 12. It was hoped that a specific test score could be found as a cut-off to predict success in the course. Two separate tests were looked at, the DRT, SRJC's standard English placement test, and the pre-Algebra test, SRJC's placement test for advanced Math courses. Both tests were used to see if they measure separate skills important for success in this course.

Grades for students enrolled in Earth Science 12 during the six semesters from Fall, 1981, to Fall, 1983, show a strong positive correlation with the students' DRT scores (Table I and Chart I). Correlations were found between grades and test scores for every semester except Fall, 1981, and a strong correlation was found for all six semesters combined (Charts IV to IX). This overall correlation was significant with less than 1% chance of error, and the number of students in the sample (114) strengthens the validity of the results. 42% of the students enrolled in the course during this timeperiod took the DRT, and this fairly high percentage also strengthens the validity of these results. Percentages ranged from 27.5% of the students enrolled in Spring, 1982, to 58.7% of those enrolled in Fall, 1983 (Table I).

Grades for students enrolled in this timeperiod in Earth Science 12 also showed a strong, positive correlation with scores on the pre-Algebra test (Table II and Charts II and III). However, only 26 students taking the course also took this test, and this small of a sample lessens the confidence that can be placed on these results. The correlation found was significant with less than 1% chance of error, however, and there does seem to be a link between these test scores and student grades.

A major goal of the study was to find if there is a score or a range of scores that separates successful from non-successful students (those receiving a grade of C or higher from the rest). Students receiving a grade of C or higher scored significantly higher on the DRT than did students receiving D or F (Table II). The mean scores were 73 vs. 66. This significance became even stronger when students withdrawing from the course were added to the results. These results were significant with less than .1% chance of error. Students receiving a grade of C or higher also scored significantly higher on the pre-Algebra test than did those receiving D or F (Table II). The mean scores were 28 vs. 15. Again, the significance became stronger when withdrawing students scores were added, and the results have less than .1% chance of error.

Although it seems clear that successful students scored significantly higher on these two measures, finding a single score or even a range of scores that discriminate between successful and non-successful students is very difficult. When looking at the range of test scores for successful vs. non-successful students (Table II) much overlap can be seen. A logical cut-off point on the DRT for success might be 68, the minimum score needed for entry into English 1A. The mean of successful students was above 68 (73), and the mean for non-successful students was below 68 (66). However, of the 68 students passing Earth Science 12, 25 of them scored below 68 on the DRT. This, then, would not be an accurate cut-off score. A conservative estimate of a DRT score that would predict success in this course would be 55, the cut-off score

for entry into English 100. Only 2 of the 68 successful students scored lower than this.

It is even more difficult to determine a cut-off score on the pre-Algebra test which would predict success in the course. 30 is the minimum needed to qualify for Math 57, but 11 of the 19 successful students taking the pre-Algebra test scored lower than this. 20 is the minimum score for entry into Math 56, but 4 of the 19 successful students scored lower than this. Math scores were looked at in hopes that they would evaluate areas of Earth Science 12 not covered by the DRT. However, these results do not indicate this. Students scoring well on the DRT tend to also score well on the pre-Algebra test, in general. The significant differences between successful and non-successful students on the pre-Algebra test may well be a result of the relationship between scores on the DRT and the pre-Algebra test, rather than a result of skills needed in the course.

In summary, strong positive correlations were found between students' grades in Earth Science 12 and their scores on both the DRT and the pre-Algebra test. These results indicate that both tests are good predictors of success in this course. However, the strong correlation with the pre-Algebra test may be more a result of the relationship between this test and the DRT, than a result of specific skills needed in the course. Also, the small number of students taking the pre-Algebra test casts doubt onto the validity of its results. Finding a specific score or range of scores needed on the DRT to predict success in Earth Science 12 was attempted, with some success. It can be confidently said that students scoring less that 55 on the DRT should be discouraged from taking this course, as they will probably not succeed in it. Students scoring from 55 to 67 on the DRT have a good chance of success, but will probably need to put more work into the course than those with a higher score. Students scoring 68 or above should have the skills needed to be successful in this course.

TABLE 1: TEST-GRADE CORRELATIONS

DRT

Semester	n	% of students enrolled	correlation	significance
Fall 1981	19	38.0	.142	not
Spring 1982	11	27.5	.634	.05
Fall 1982	32	41.6	.400	.05
Spring 1983	12	41.4	.741	.01
Summer 1983	3	25.0	1.000	.01
Fall 1983	37	58.7	.471	.01
COMPOSITE	114	42.1	.419	.01

pre-Algebra

Total students Fall 1981 to Fall 1983	26	9.6	.529	.01

TABLE II: RELATIONSHIP OF TEST SCORES TO SUCCESS IN COURSE

DRT

grade	n	mean	s.d.	range	F	signifanc
A-C	68	72.78	10.35	92-52		
D/F	46	65.54	11.02	88-43	12.72	.001
D/F/W	87	65.43	10.55	88-41	18.85	.001

Note: 25 of 68 students receiving A-C scored lower than 68 on DRT
2 of those 25 scored lower than 55

pre-Algebra

A-C	19	28.00	8.09	43-15		
D/F	7	15.29	6.55	23-5	13.83	.001
D/F/W	12	17.42	6.77	25-5	14.23	.001

Note: 11 of 19 students receiving A-C scored lower than 30 on pre-Algebra
4 of those 11 scored lower than 20

TABLE III: AVERAGE TEST SCORES BY COURSE GRADE

DRT

grade	n	mean	s.d.	range
A	6	77.0	11.35	90-60
B	17	78.4	8.57	92-61
C	45	70.1	10.01	90-52
D	28	66.9	9.46	79-43
F	18	63.5	13.12	88-43
W	41	65.3	10.13	80-41

pre-Algebra

A	1	36.0		36
B	9	27.1	8.01	43-19
C	9	28.0	8.62	39-15
D	5	15.0	7.71	23-5
F	2	16.0	4.24	19-13
W	5	20.4	6.54	25-9

CHART 1:

ES12 DRT/GRADE CORRELATION

COMPOSITE (Fall '81 - Fall '83)

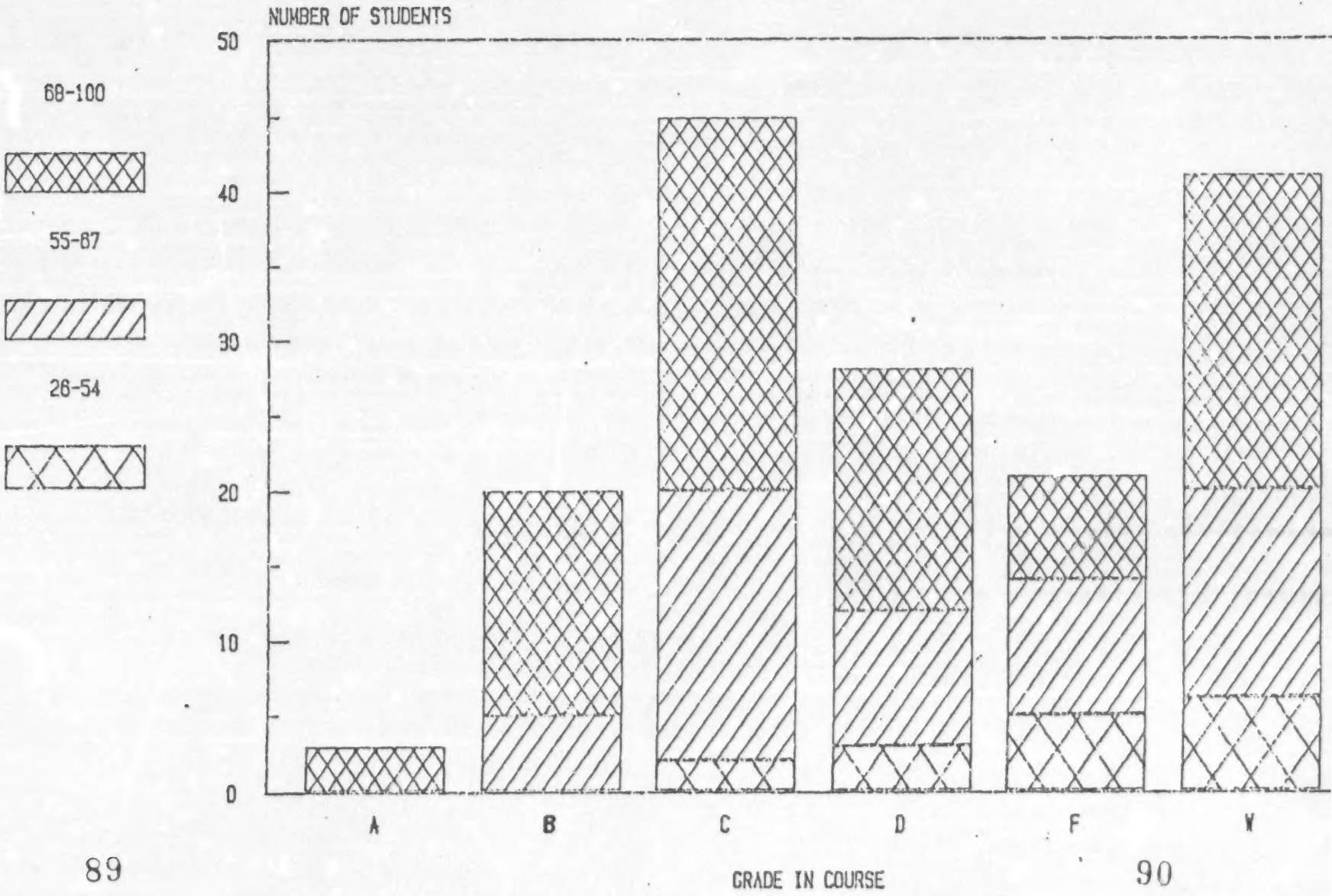


CHART 11:

ES12 MATH/GRADE CORRELATION

Pre-Calculus COMPOSITE (F '81 - F '83)

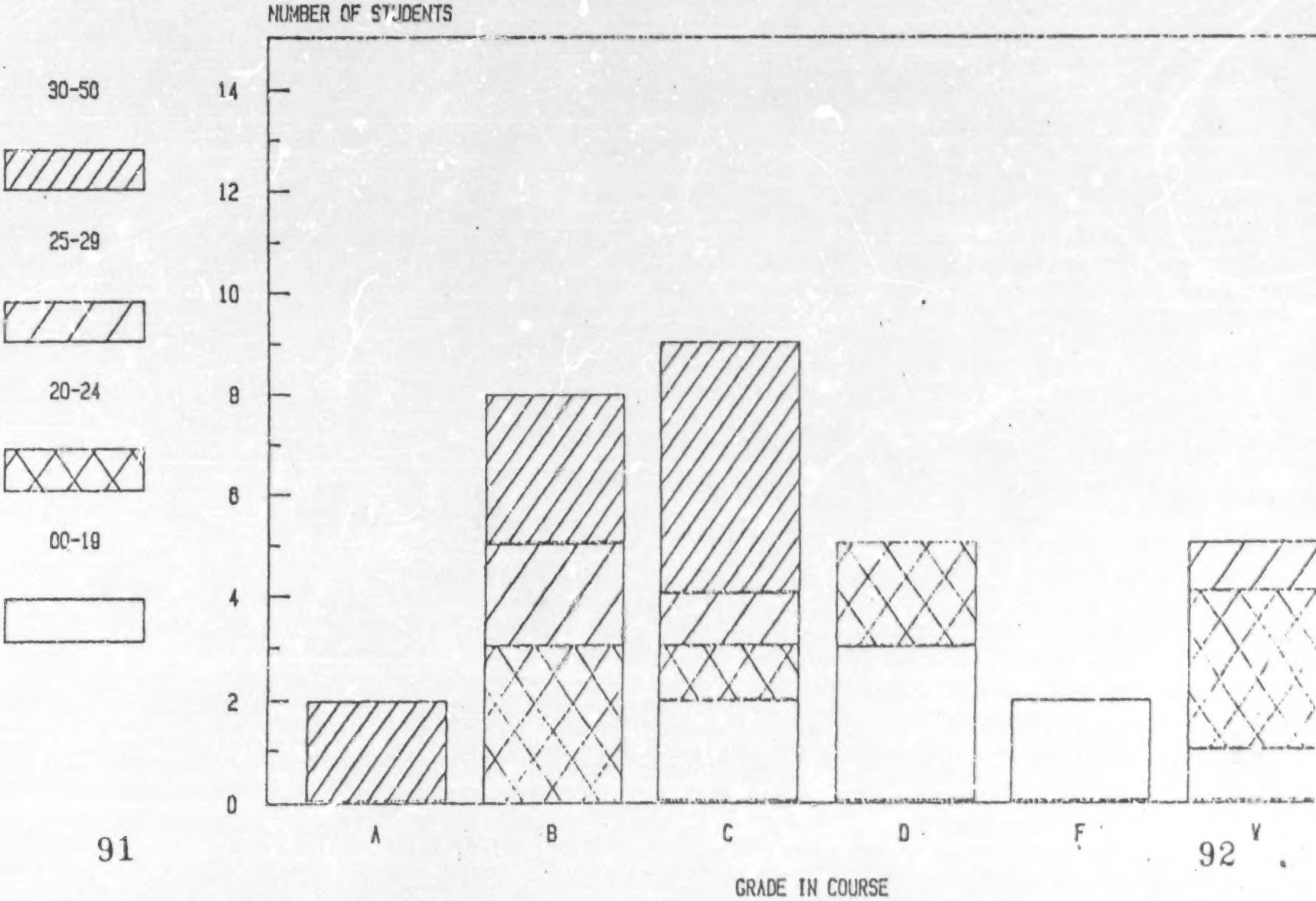


CHART III:

ES12 MATH/GRADE CORRELATION

COMPOSITE SUMMARY

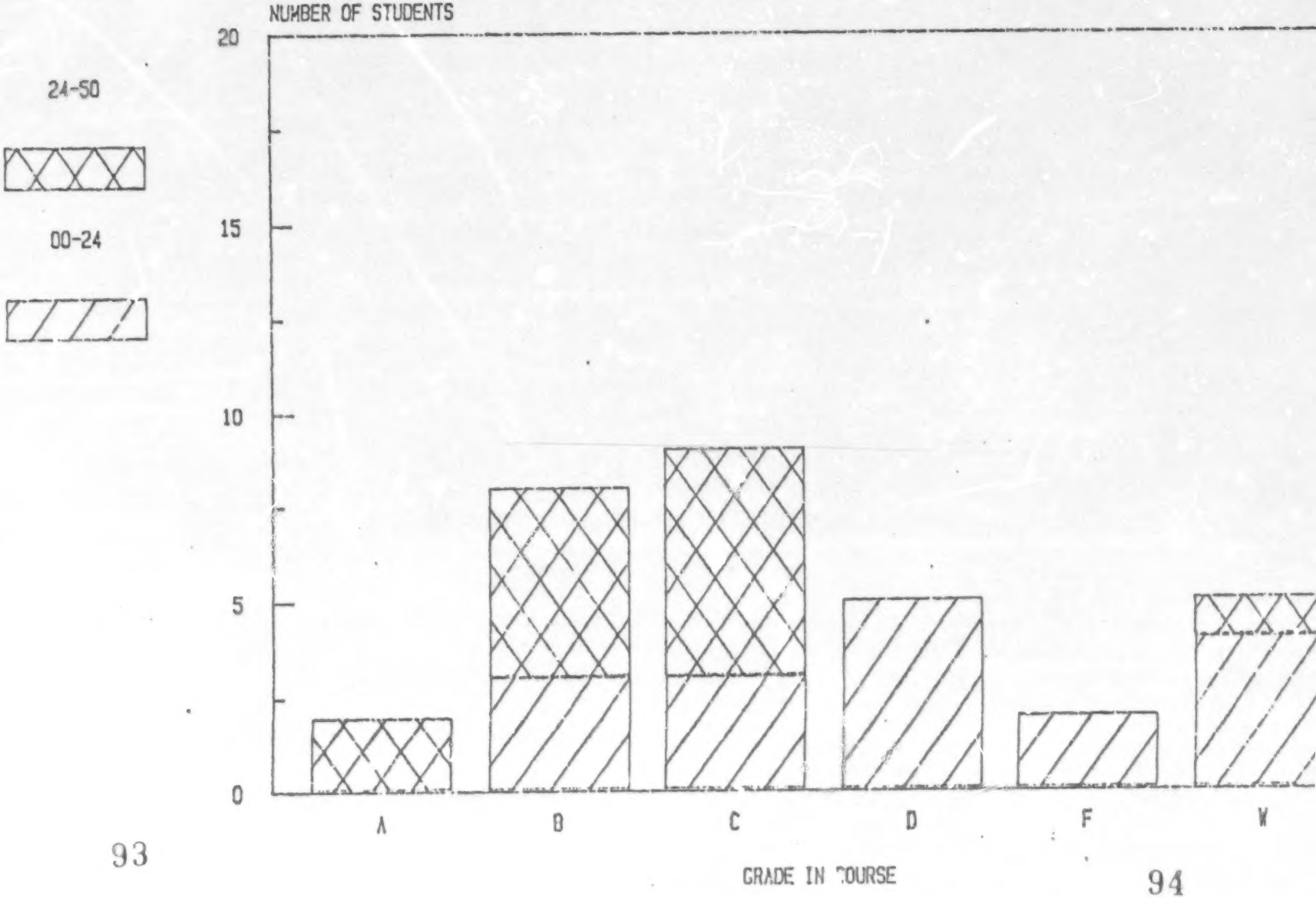


CHART IV:

ES12 DRT/GRADE CORRELATION

FALL 1981

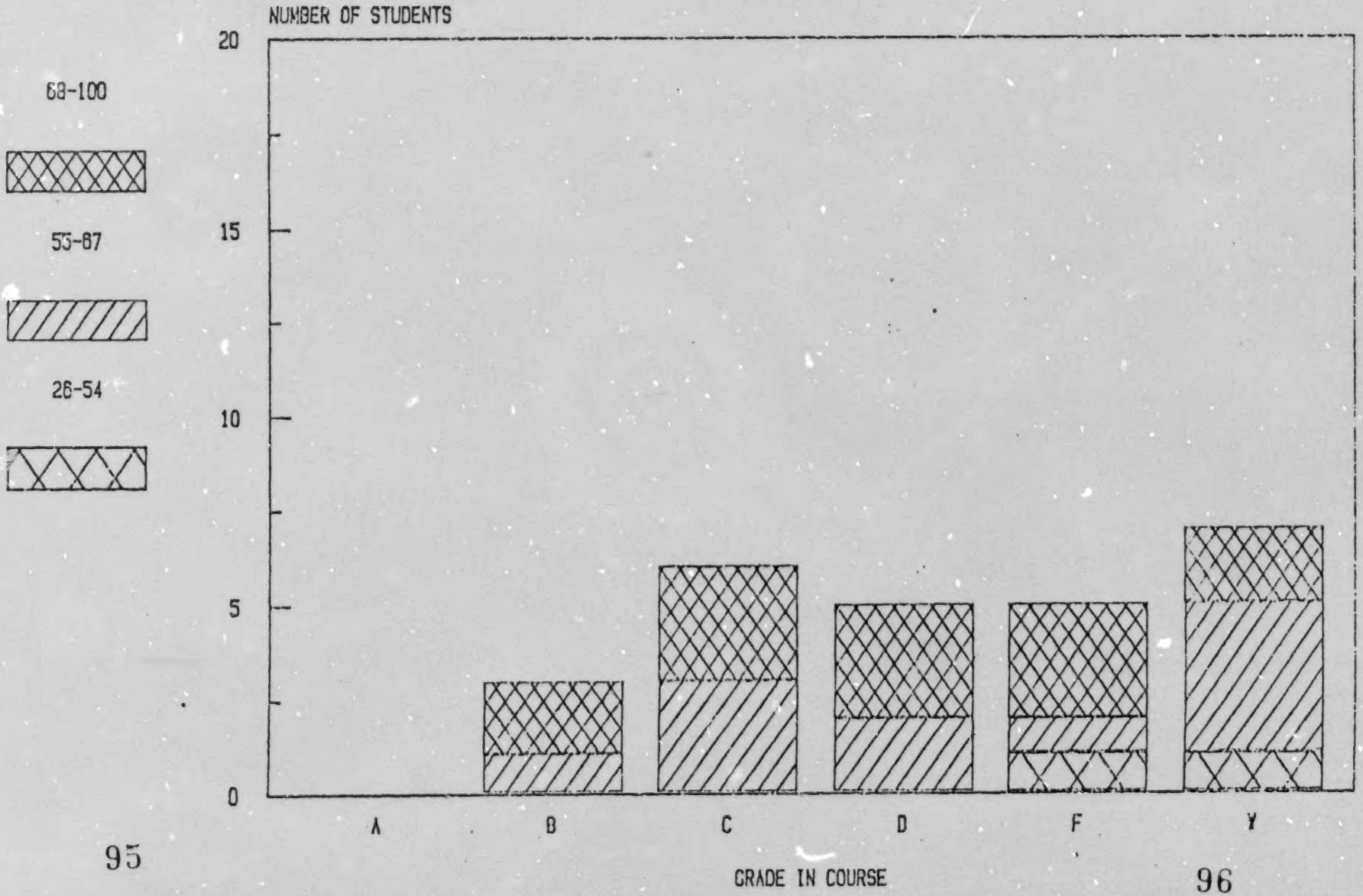


CHART V:

ES12 DRT/GRADE CORRELATION

SPRING 1982

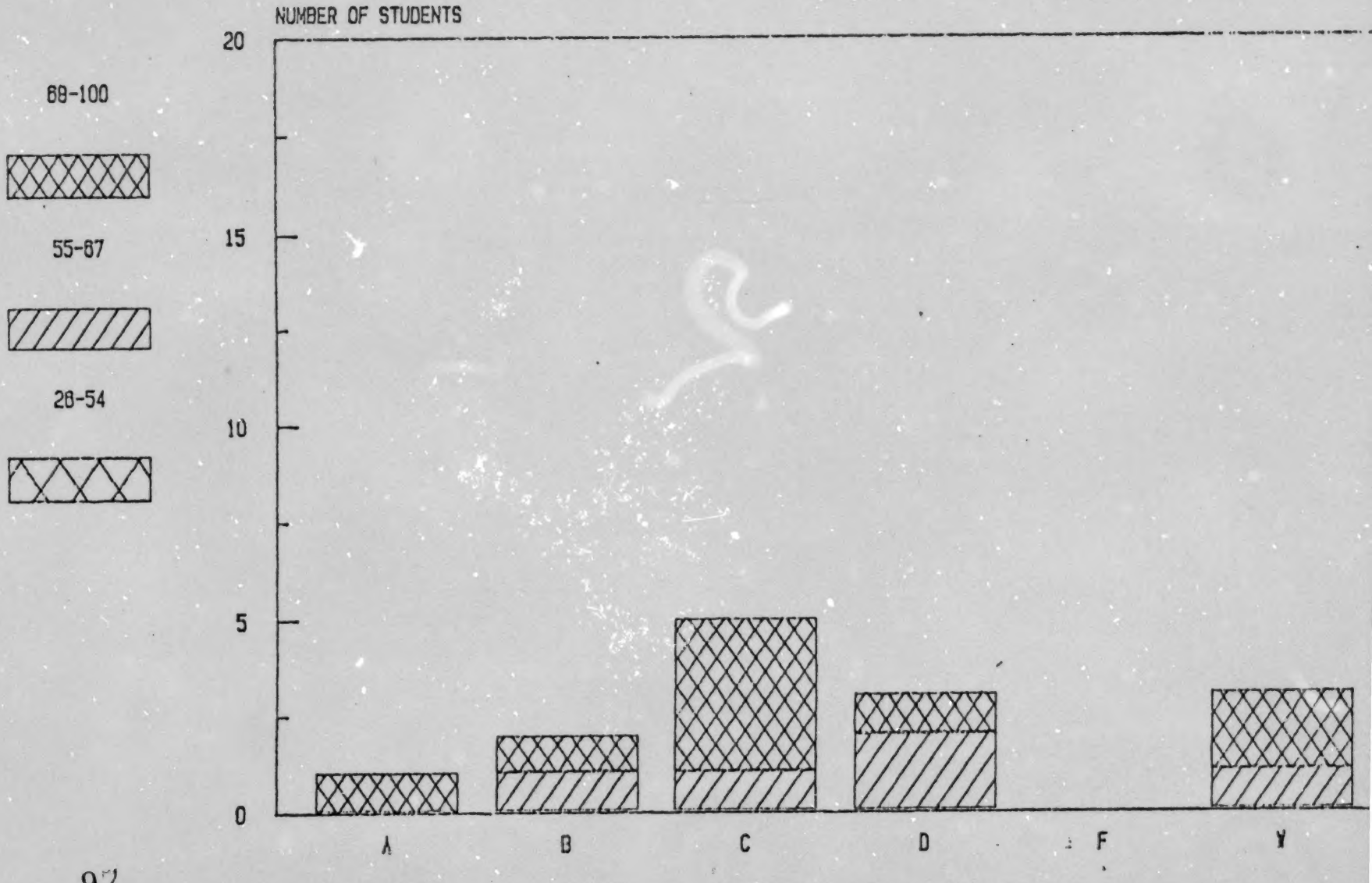


CHART VI:

ES12 DRT/GRADE CORRELATION

FALL 1982

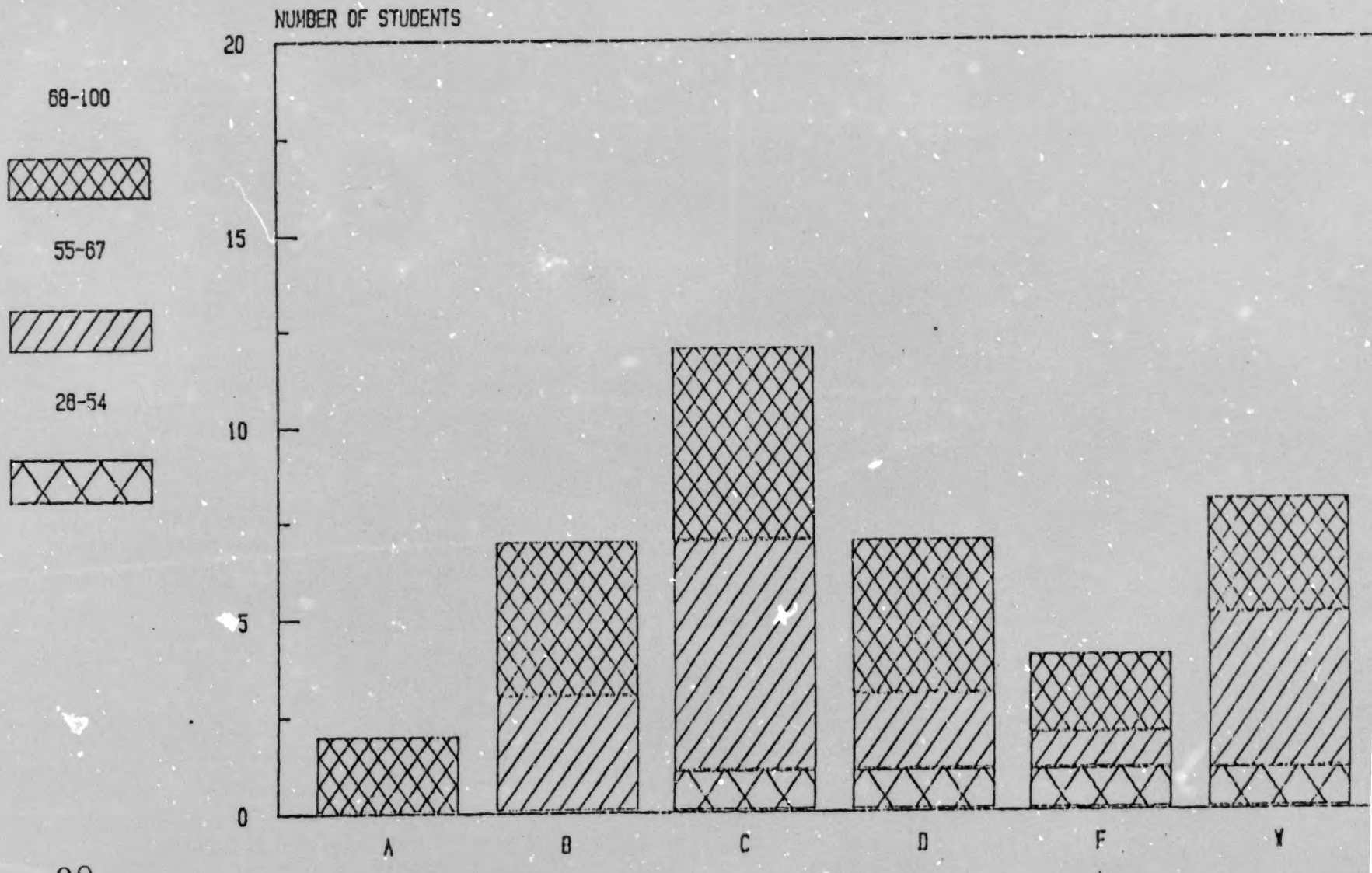


CHART VII:

ES12 DRT/GRADE CORRELATION

SPRING 1983

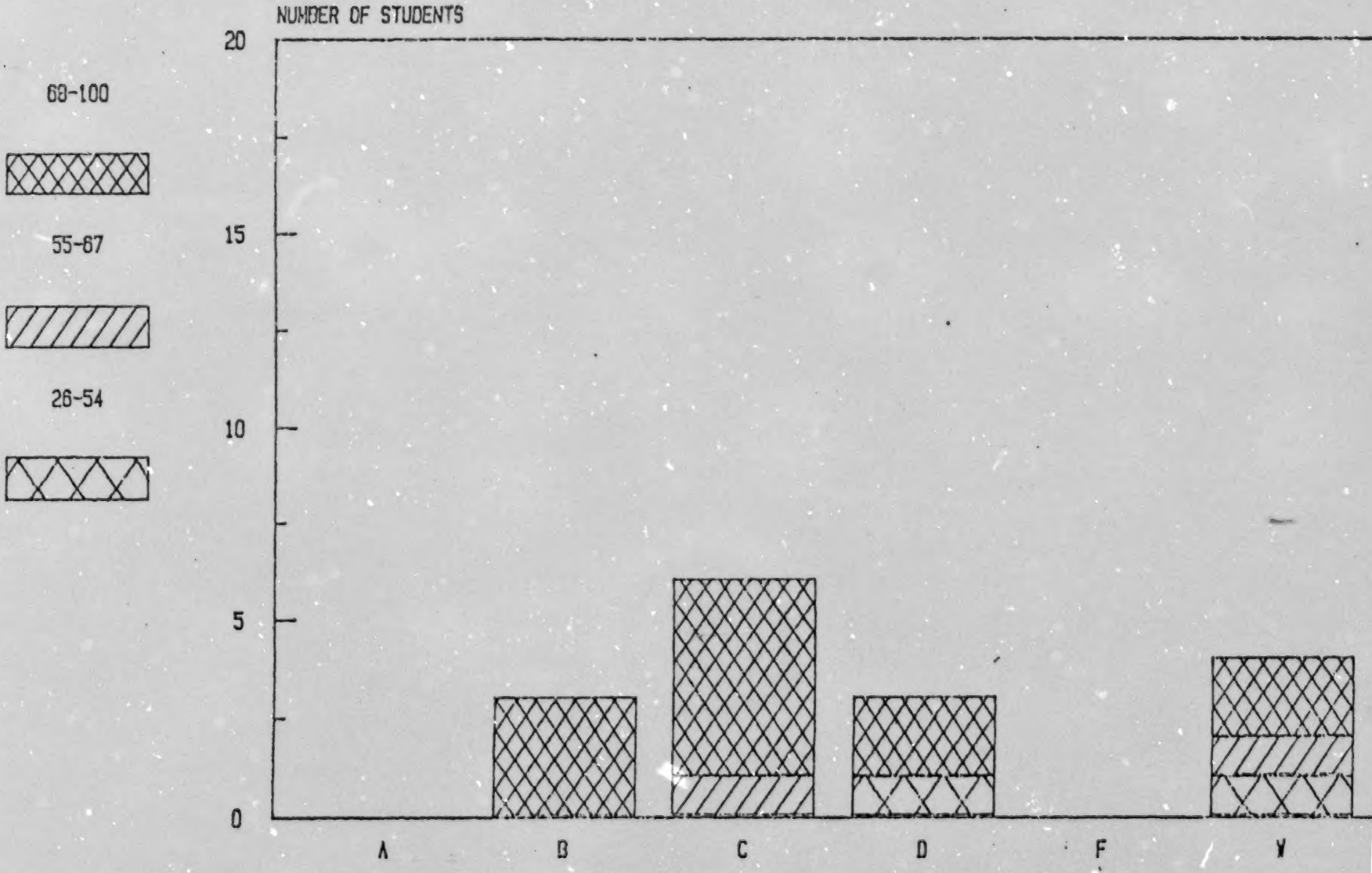


CHART VIII:

ES12 DRT/GRADE CORRELATION

SUMMER 1983

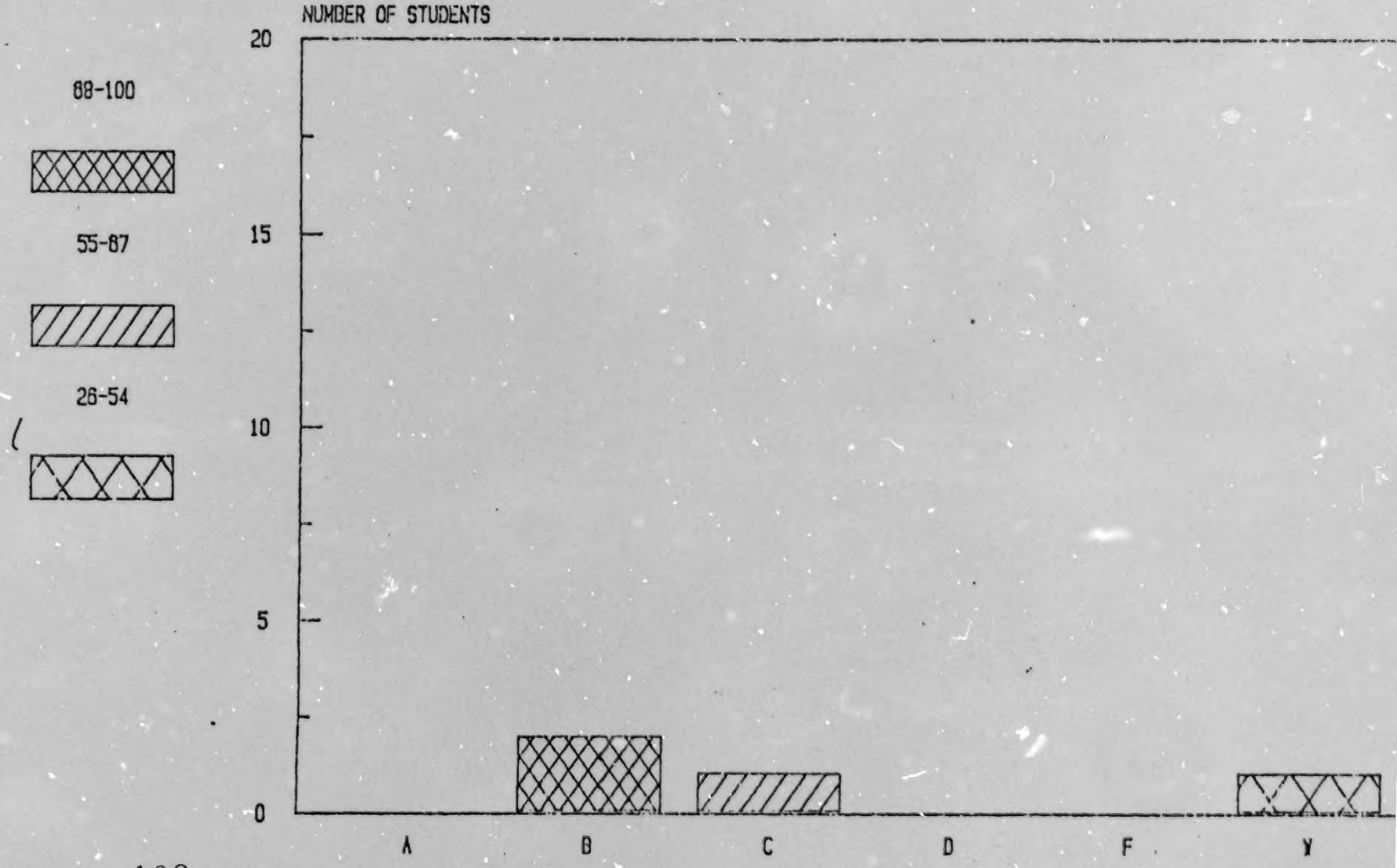
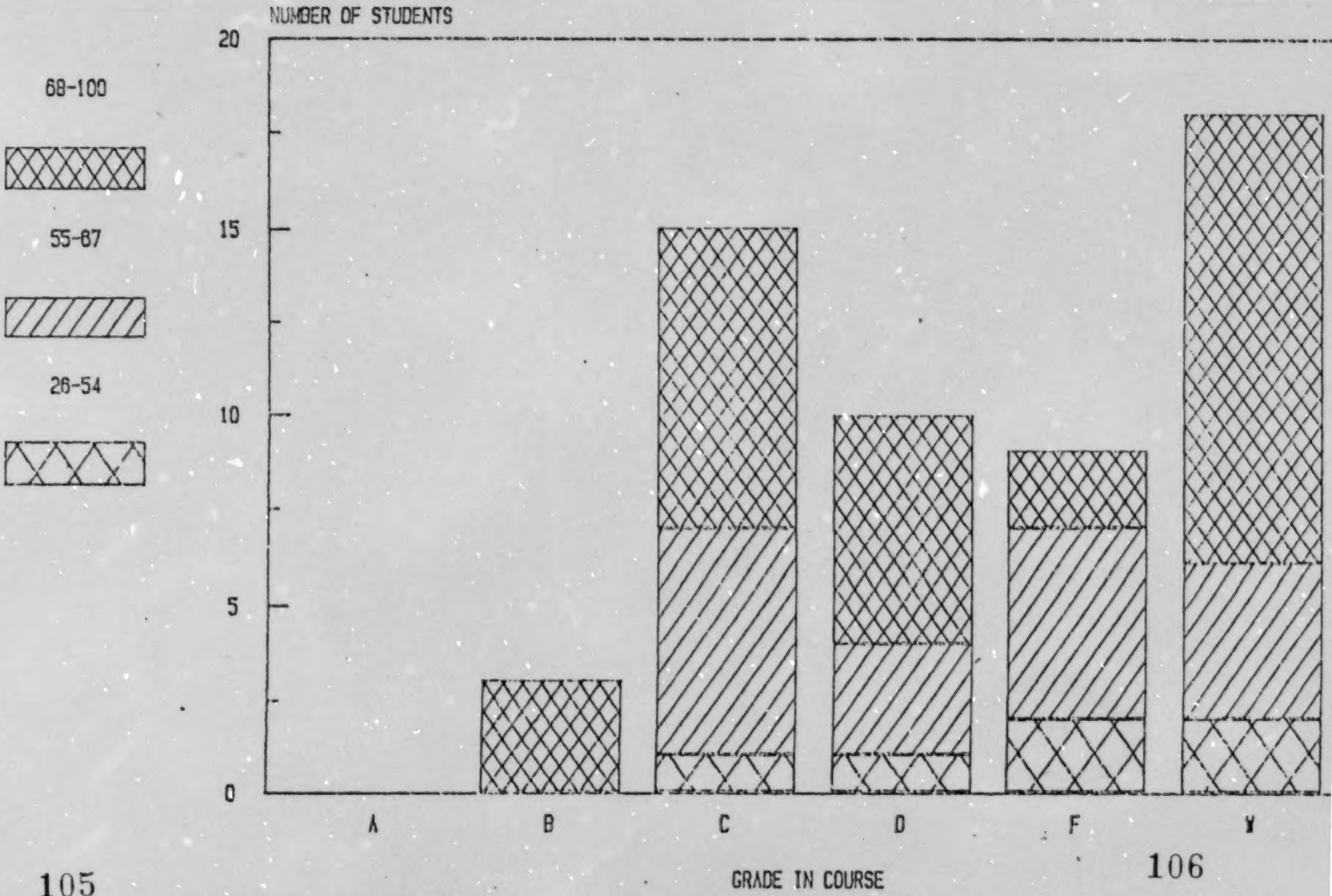


CHART IX:

ES12 DRT/GRADE CORRELATION

FALL 1983



APPENDIX D: Student Evaluations

Guidance 65 Evaluation

January 9, 1984

To: All students enrolled in Guidance 65, Sect. 1580

From: Jim Menzel, Instructor

As a requirement for Guidance 65, we are asking you to fill out this evaluation and send it back to us by January 23, 1984. You will need to schedule about 1/4-hour to complete the form. However, it is very important to do this! Your responses will be very useful for us in determining how successful this course was and in deciding whether we will offer a similar course in the future. Although we need your name to give you the one hour of time, your responses will be kept completely confidential.

Student's Name _____ SSN _____

Please put an 'X' under the category that is most appropriate.

In your opinion, how useful was the:	very	somewhat	not at all	did not do
DRT test				
ASSET test				
Academic counseling				
Career counseling				
Tutorial center				
Library time				
Guidance 65 class as a whole				

Which was most useful for you? _____ Which was least useful? _____

How difficult was it for you to complete the 16 hours?

very difficult somewhat difficult not at all difficult did not complete

Were the requirements for the course:

clear somewhat clear not at all clear

Was the course useful enough that you feel we should offer it to students in the future?

Yes No Uncertain

Any other comments that you feel would be useful to us?

Thanks again for filling out this evaluation. Your opinions will be noted. Please return this form by January 23 in the enclosed envelope.

Date: March 22, 1984
To: Jim Menzel, Assistant Dean Admissions and Records
From: Bruce Peterson, Testing Technician

Re: Summary of Students Involved in ASSET Grade Correlation

I have put together a summary of the students involved in the grade study we are going to send to ACT; those students whose Educational Planning Forms we have already sent. Below is a summary of the number of students as well as their retention rate for this semester. Let me know if you have any questions on this data.

Number of students in the study	205	
Number of students retained	156	76.1%
Number enrolled Gu.65	158	54.5% of total class
Number not enrolled Gu.65	40	19.5% of study
Number never enrolled at SRJC	7	
Number Gu.65 enrollees retained	129	81.6% of enrollees
Number non-Gu.65 students retained	27	67.5% of non-enrollees
Number students completing Gu.65 in study	69	74.2% of all students completing class
Number students completing Gu.65 retained	62	89.9%

This data seems to be the strongest indication we have yet of the Guidance 65 class and its value. Over 80% of the students in this study that were enrolled in the course came back this semester. Even more dramatic is the fact that nearly 90% of the students in this study completing the course came back this semester. A final point to note is that although we had only 55% of the ASSET class involved in this study, we had nearly 75% of those completing the course involved. This seems to show that those students that were more serious about ASSET turned in their EPF's, and as a whole, came back to SRJC this semester. I think that this, again, points out the value of the course for the students motivated to get something out of it.

Guidance 65 Summary Chart

Total students signed-up:	313
Total receiving credit:	93
Total not receiving credit:	199
Total withdrew from class:	21
Final total enrollment:	292
Total students exceeding 6 hours in January	109

Guidance 65 - Evaluation Summary

We received back 108 evaluations--a little better than one-third of the class responded. The greatest number of responses indicated that the students felt the course was disorganized and the requirements were poorly explained. Students found it hard to get answers to questions, because the people with the answers were not readily avaliable. The change of instructors was also confusing. Some students also felt that getting instructions by mail was also confusing and impersonal. There were also a few students who never realized they were enrolled and did not want to be.

Another significant number of students had trouble because of their busy schedules or the fact that they are night students. They felt that the hours for the class needed to be more flexible, as they had great difficulty trying to complete the entire 16 hours. A few also had a lot of difficulty getting an appointment for test interpretation and counseling, because they are night students. This seemed especially true for students starting the course part-way through the semester.

Getting counseling appointments seemed to be a common problem with the students, but once they got one, the counseling seemed to be very useful. Many students considered the academic counseling to be the most useful part of the course. Both Jean and April were named as being especially helpful.

The course seemed most helpful for students who were unsure of the direction they want to take in school. The combination of testing and counseling was especially helpful for this group of students. On the other hand, students with a clear educational direction in mind seemed most frustrated and seemed to get the least out of the course.

Although there was a great deal of confusion and frustration reported, nearly two-thirds of the students responding stated that they feel the course should be offered again. A number seemed to think that the course has a great deal of potential but needs to be organized better. There was even the suggestion that it be made into a semester-long class.

All in all, Guidance 65 seemed to be helpful to a number of students, particularly those who were unsure as to their educational direction when the course started. The confusion generated by the lack of clarity in the requirements and the lack of direct contact between the students and the instructors hurt the effectiveness of the course. However, this course does seem to have a strong potential to be very useful for a number of students. With a different structure providing for more contact between the students and instructor, this could be a very successful course.

Guidance 65 - Evaluation Totals

Number of evaluations returned: 108

1. How useful was the:	very	somewhat	not at all	did not do
DRT test	49	42	9	6
ASSET test	39	49	17	5
Academic counseling	45	32	9	17
Career counseling	38	31	9	29
Tutorial center	24	21	7	52
Library time	62	23	4	21
Guidance 65 class as a whole	29	50	14	4

2. Which was most/least useful for you?	most	least
DRT test	15	20
ASSET test	15	16
Academic counseling	32	7
Career counseling	25	17
Tutorial center	8	20
Library time	31	11
Guidance 65 class as a whole	3	6

3. How difficult was it for you to complete the 16 hours?

Very 14 Somewhat 36 Not at all 43 Did not complete 17

4. Were the requirements for the course:

Clear 44 Somewhat clear 48 Not clear at all 17

5. Was the course useful enough to offer again?

Yes 70 No 16 Uncertain 29

APPENDIX E: Assessment Advisory Committee

Assessment Advisory Committee - meet at least once a semester, not more than once a month

-- Associate Dean of Instruction

-- One Liberal Arts Instructor

-- Associate Dean of Occupational Education

-- One Occupational Education Instructor

-- Assistant Dean of Counseling or designee

-- Assistant Dean of Admissions

-- Resource person from English Dept. appointed by the Dept. Chair

-- Resource person from Math Dept. appointed by the Dept. Chair

-- Dean of Student Services

-- One Student (appointed by CSA)

The role of the Advisory Committee will be to

1. serve as the college team for the Learning Assessment and Retention Consortium (LARC);

2. assist the Assessment Director in determining the goals and objectives of the Assessment Program;

3. assist the Assessment Director in developing an assessment and placement policy and guidelines.

In addition to the Advisory Committee, a Resource Team will be formed to serve as an ongoing working support group for the Advisory Committee. The composition of the Resource Team may change as the needs of the Assessment Director and Assessment Advisory Committee change.

Jim Menzel

Santa Rosa Junior College ASSESSMENT PROGRAM

TO: Assessment Advisory Committee

FROM: Vicki Ross Vicki Ross

DATE: November 18, 1983

SUBJECT: Minutes of September 26 Meeting

Present:
K. Holback, E. Pollard, A. Steinmetz, B. Duxbury, V. Ross, A. Chaney, J. Menzel, E. Buckley.

I. Biology 11 Correlation Study--Application to Other Courses:
Ross explained the study she has performed for Biology 11. Students grades and DRT scores were compared for the Fall 1982 and Spring 1983 semester. The results seemed to show that students with a score equivalent to placement in English 100 would have a better chance of completing the course successfully (grade of "C" or better). The department is considering including this recommendation in future catalogs. Ross is presently comparing actual points received in the class with the test score to obtain a better statistical correlation. A problem with the study is that at least one-third of the students had not taken the DRT. It will be given to all Biology 11 students this semester to gain more data. This same study will be performed with CFS 62, and any other class an instructor requests. Ross will advertise this study in the assessment newsletter. In the future, Ross will be able to choose a class, such as English 100, and use the course relationship model to ascertain what other classes the majority of these students take. Then a comparison of DRT scores can be made with grades in class. The information can then be forwarded to the department, which might then develop a placement recommendation regarding DRT scores. (Such a small percentage of students have ACT and SAT scores, rather than DRT, that they were not studied.) Buckley commented that a system of prioritizing the requests for assessment projects will need to be developed as the number of requests increases. The assessment staff and committee need to emphasize the positive aspects of the study. That is, we are not developing placement recommendations to keep students out of classes, but rather to place them in classes they can succeed in.

II. ASSET Program:
Ross reported that testing has been ongoing since August. We have now administered approximately 350 tests. Students have been solicited through the admissions application process and in math, guidance, English, biology, dietetic technology, speech, psychology and business classes.

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III. Matriculation Study:
Ross reported that the project is progressing. Students are presently seeing counselors to have their scores interpreted and to plan their future program of study. The paperwork involved is tremendous and is consuming a majority of time of the assessment student aide's time.

IV. Math and DRT Guidelines:
Ross reported that she had been concerned about the lack of a policy, in regard to the recency of scores and the retaking of the DRT and math tests. After discussions with the math department, they have agreed to the following policy--students may take the pre-algebra and pre-calculus tests once a semester and the score is valid for three years (this is consistent with the policy on course prerequisites). Ross asked Duxbury to bring this issue up to the English department and to report back at the next advisory meeting. Once the policies are established in the English and math departments, Ross agreed to meet with the health occupations faculty and the police academy faculty to try to develop consistent policies. Ross has worked out an arrangement with computing services to monitor these policies.

There is no way to enforce the prerequisite of the tests at registration, as students can meet the math and English prerequisites with prior coursework also. Ross also agreed to work with the math department to develop a counseling card for the math tests, such as the one presently used with the DRT for admission to English classes.

V. Assessment Newsletter:
Ross will be writing the newsletter shortly, and it should be distributed in November to all faculty.

VI. Speaker for Campuswide Assessment Lecture:
Ross suggested that the lecture be held in the Spring semester. Buckley suggested that the lecture might be coordinated with the Senate's discussions of the College's mission and program review. Ross asked committee members to share any ideas they might have for the lecture. Two hundred dollars is available for a speaker.

VII. Announcements:
A. There is a LARC conference on November 18. Ross and Chaney will attend, others are welcome to attend also.

B. Ross has met with computing services, the math department, and the instructional department concerning math scores on the temporary roll sheets. All involved have agreed to implement this, beginning with the Spring 1984 semester. Ross will write a memo explaining the math and DRT scores to accompany the roll sheets.

C. There was a brief discussion of GED testing with Ross agreeing to gather more information concerning this.

December 1983

ASSESSMENT NEWSLETTER

FROM VICKI...

Dear Faculty, Staff, and Students,

By the time you read this, most of you will have already heard that I recently resigned. I have been considering a career change for a while and recently I was offered a job in the private sector that will enable me to pursue my interests.

The Assessment Program projects are all progressing well (see individual reports) and will continue as will all the regular assessment services. Jim Menzel, Assistant Dean of Admissions and Records, will serve as interim director until the position can be advertized and refilled.

I have enjoyed meeting and working with you. There are many of you that in my four years here I have come to know as friends. I will miss you all and thank you for the assistance, support, and friendship you have offered. Best wishes to all.

Warmly,
Vicki Ross
Vicki Ross

DRT & MATH TEST POLICIES

New policies for the DRT and Math tests have recently been implemented. The policies concern the retaking of tests and the period of time for which the scores will be considered valid.

MATH TEST POLICIES

PRE-ALGEBRA & PRE-CALCULUS

Students may take these tests only once per semester. The score on the tests can be used for three years to meet the prerequisites for Math Dept. courses. After three years, the test would have to be retaken.

PSYCH TECH / LVN MATH TEST

Psych Tech students and LVN students may take this test up to twice per semester. The score on this test can be used for three years to meet the prerequistes for the LVN and Psychiatric Technician Programs.

DRT POLICY

No student can take this test more than once every eight weeks. If a student takes it more than once during this period, the additional score(s) will not be recorded.

The score on the DRT can be used for three years to meet the prerequisites for the English Dept., the Psychiatric Technician Program, and the LVN Program. After three years, the test would have to be retaken.

Over →

SPECIAL RESEARCH PROJECT

The Assessment Program staff have recently completed new research projects for the Biology and the Consumer and Family Studies Departments. The research project involved looking at final grades given and ORT score for a particular course over a two semester period. Data concerning the level of success in the course for each DRT level was gathered and discussions held with the department concerning a recommendation on DRT level for the course to be printed in the catalog. (The decision about a recommendation is the department's, the assessment staff will provide the data for the discussion.) This service is available for all courses on campus. If you are interested in obtaining data on your course, please phone the Assessment Office at x4375 or Jim Menzel at x4286.

ASSET UPDATE

The Asset norming project is progressing well and the final phase is about to begin. As you will recall, Asset is a comprehensive battery of abilities tests developed by ACT. We have been administering the test this semester in order to assist ACT

April Chaney, who has been the Testing Technician here for 16 years continues on the Assessment staff and is available for questions. Her extension is 4375. April is usually in her office unless she is out administering tests.

in developing norms for community college students.

The final phase of the project involves administering three of the tests to 1000 students enrolled in basic courses (primarily English and math). This phase will be conducted in January. We will then provide ACT with the final grades of all students that have taken the test. ACT will provide us with data concerning the effectiveness of the test for placement purposes. We will use this data in the Assessment Improvement of Instruction project.

MATRICULATION UPDATE

The matriculation project involves five phases - admission, assessment, orientation, counseling, and follow-up. The final phase, follow-up, is the only one remaining to be completed. A student questionnaire regarding the services of admissions and records, counseling, and assessment is being developed and will be mailed to students in January. Upon receipt of the evaluations, a report critiquing the entire project will be written and made available to all SRJC personnel.

To: Assessment Advisory Committee

From: Jim Menzel, Admissions and Records JM

Date: 12 January 1984

Re: Status Report

Because the simultaneous closing of one semester and the opening of another brings heated activity to all offices of the campus, I think it is wise to delay a committee meeting until late in February. However, I believe it is incumbent upon me as Vicki's interim replacement to make a brief report to you during this period of void between meetings.

In Summary:

1. At the December 13 meeting of the Department Chairs, I very briefly re-affirmed the goals of the Assessment Program. (I also indicated the committee's concern that campus-wide support must be assured for the assessment program to work!) Goals articulated were

    a) Evaluation of assessment instruments.
    b) Development of prescriptive statements.
    c) Correlation (on-going) of grades and test scores to facilitate curriculum planning and development.

2. Cover sheets for temporary rosters that explain the test scores printed thereon have been prepared for distribution on January 30. (Sample attached. Note second side, too.)

3. The grade correlation study of Bio 11 students has been abandoned; logistical problems! A study of CFS 62, however, is nearing completion; a study of Earth Science 12 is being proposed.

4. Bruce Peterson, our testing technician, is pulling together a lot of loose ends. He and April are deeply involved in routine and special test administration, and both are doing a splendid job!

5. Matriculation Project update.

    a) Guidance 65 students have been given final instructions on how to complete the course requirements. About 300 will probably be successful.
    b) Course evaluation forms have been sent to all Guidance 65 students to help us analyze the value of the project.
    c) ASSET testing has been completed and/or scheduled. Norming and grade correlations will be the result. We will furnish data to ACT in February. While participation has not been ideal, we expect to provide a representative sample. As you recall, students tested in 10 courses will furnish grade correlation/predictive value information; students tested in 7 other courses will furnish ASSET norming information.

6. We plan to identify a large spring class, give the DRT early, and furnish another grade correlation study.

7. The plan to use a placement card by mathematics faculty has been abandoned. It seemed only to create more clerical detail.

Santa Rosa Junior College ASSESSMENT PROGRAM

TO: Faculty

FROM: Jim Menzel

DATE: January 30, 1984

SUBJECT: Math and DRT Scores Appearing on Temporary Rosters

For the first time, both an English and a mathematics placement test score may be appearing under students' names on the temporary roster. Tests are abbreviated as follows:

DRT	- Diagnostic Reading Test
ACT	- American College Test
SAT	- Scholastic Aptitude Test
Alg	- SRJC algebra pre-test
Calc	- SRJC calculus pre-test
PT/N	- SRJC mathematics test for admission to the LVN and Psychiatric Technician Programs.

Asterisked test scores are over one year old. Only one English and/or one mathematics score will print, even if more of each are taken. If more are taken, preference is assigned as follows:

English placement	- DRT	- first
	ACT	- second
	SAT	- third
Math placement	- Alg	- first
	Calc	- second
	PT/N	- third.

Placement information is shown on the reverse of this sheet. If you have any questions, please telephone April Chaney (527-4375) in the Assessment Office or me (527-4509) in Admissions and Records.

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RECOMMENDED COURSE PLACEMENT

Course	Test/Score		
English 1A	DRT 68	ACT 20	SATV 420
English 100	DRT 55-67	ACT 15-19	SATV 320-410
English 105	DRT 26-54	ACT 6-14	SATV 310-200
English 107	DRT up to 25	ACT 1- 5	---
Basic Police Academy	DRT 55	---	
PT/LVN	DRT 60	PT/N Tech Math 28	
Nurse Aide/Home Hlth. Aide	DRT 55	---	
Rad. Tech.	DRT 55	---	
Math 1A (Calc)	Math Calc 24-34		
	Math Calc 18-23	(Marginal; recommend concurrent enrollment in Math 12 with tutorial assistance)	
Math 11 or 57	Math Calc 0-17		
Math 56 (algebra)	Math Alg 30-50		
	Math Alg 25-29	(marginal)	
	Math Alg 20-24	(very marginal)	
Math 151	Math Alg 20-24		
	Math Alg 0-19		
Math 150A or B	Math Alg 0-19		

RECENCY AND RETAKE POLICY

MATH: Students may take the pre-algebra and pre-calculus exam once a semester. The score on the test can be used for three years to meet the prerequisites for Math department courses. After three years, the test would need to be retaken.

DRT: Students may take the exam once every 8 weeks. Students taking the exam more often than once every 8 weeks will not have the test scores for this time recorded; scores will only be recorded once every 8 weeks. The score on the test can be used for 3 years to meet the prerequisites for the English department, the LVN program, and the Psychiatric Technician program. The test would need to be retaken. (The Psych Tech program only allows the test to be taken twice a semester.)

LVN MATH TEST: Students may take the math test twice a semester. The score on the test can be used for 3 years to meet the prerequisites for admission to the LVN program.

PSYCH TECH MATH TEST: Students may take the test only twice a semester. The score on the test can be used for 3 years to meet the prerequisites for admission to the Psych Tech program.

JM:fl

ASSESSMENT ADVISORY COMMITTEE
28 February 1984

Agenda items for this meeting include the following:

1. Introductions
   Guests
   Members
2. Meeting times and frequency
3. Assessment Program staffing
4. Role of this committee (a refresher)
   a) Serve as the LARC college team
   b) help to develop goals and objectives of the program
   c) help to develop policies and guidelines
   d) populate a "Resource Team" as needed to support the Advisory Committee.
5. Goals and objectives/Campus-wide support
6. Status report on projects
   a) ASSET and matriculation
   b) Grade correlations/DRT/Reading Laboratory
   c) Retake policy
   d) Scores on temporary rosters
   e) GED Testing
   f) LARC
   g) Prescriptive statements
7. Future projects
   a) Faculty In-Serivce and guest lectures
   b) Newsletter/Annual report
   c) Course relationship models
   d) Testing information for catalog and class schedule
   e) Other

APPENDIX F: Research Technician Status Report

February 28, 1984
To: Assessment Advisory Committee
From: Bruce Peterson, Testing Technician

Re: Summary of Completed and Projected Work

I have been or will be involved in five separate projects. I would like to give you a summary of what has been accomplished and what is left to do by June. The studies indicated by a (*) have much more detailed summaries available for the asking.

1. ASSET Class (Guidance 65)*

The class itself ended last month. Of the 292 students enrolled, only 94, or a little over 1/3, received credit for it. This low percentage seemed to result from a combination of poor administration on our part, and a lack of motivation on the students' part. However, from evaluations we received, the class seemed to be helpful for a majority of the students taking it.

For another part of the ASSET study, April and I gave selected parts of the ASSET test to 424 students in 21 classes in January. These were students in either English 1A, 1B, 100, or Math 11, 56, 51, or 170. The results from these tests will be sent to ACT as part of their normative study on ASSET.

We are running close to 6 weeks behind in receiving materials from ACT and sending the rest of ours to them. This seems to be a result of delays on both of our parts, and we hope to cut the delay down to 3-4 weeks by the end of the entire study. Currently, we are waiting to receive class rosters and grading sheets from them,so that we can fill them out and return them as part of the grade correlation study. Our use of the ASSET scores will be discussed below in the section on the Matriculation Project.

2. Matriculation Project

It is our goal to correlate final grades with DRT, SDRT, ASSET, and SRJC Math scores for the students in the ASSET Class. We also hope to relate the test scores to other classes that students had in common, as well as looking at differences between success in courses recommended by counselors and success in those not recommended. We plan to present the results of this study to the faculty by late April.

I have just finished the first piece, evaluating success in courses by whether a counselor recommended the class or not.* The results indicate that counselor recommended courses did indeed have a significantly higher percentage of success for the ASSET students. This ties the need for preliminary academic counseling into overall success for students, and is an important first step for this study.

3. Ongoing DRT/Grade Correlations

Last month, I ran a correlation study between DRT and final grades for the Fall, 1982, and Spring, 1983, semesters for CFS62.* The results showed a significant, positive correlation between the two, indicating that the DRT was a valid predictor for success in this course for both semesters. I am currently starting a similar study for Earth Science 12 for Fall, 1981, Spring, 1982, Fall, 1982, Spring, 1983, Summer, 1983, and Fall, 1983 semesters. I hope to have this study completed by late March.

4. Reading Lab Study

Early this month, April and I gave the DRT to 258 students in 11 classes. Along with using these scores in our on-going DRT/Grade correlation, we also plan to use them in a study Rosemary Ward of the Reading Lab helped design. We will look at students with scores of 54 or below (English 105 or 107 recommended), and see if those students that use the Reading Lab will have greater success in their courses than those scoring below 54 and do not use the Lab. We will have to wait until grades come out in late June to finish this study.

5. Summary of Trisha Carter's Work*

A final project I have been working on is going over the study Trisha Carter did last year and summarizing it in terms of our current DRT/Grade investigation. She gave the DRT to 641 students in 21 classes, compared the scores with final grades, and broke the results down between students in Occupational courses and those in Liberal Arts courses. When doing a correlational analysis on this data, I found that there was a significant positive correlation between DRT scores and grades for both Occupational and Liberal Arts students. These results help strengthen our hypothesis that the DRT is a valid predictor for success for a wide-range of courses at SRJC.

In summary, all the studies I have run so far indicate that the DRT is a valid predictor for success/failure by students in a number of courses and disciplines. It seems to be especially good at predicting difficulties students will have, as those receiving 54 or lower have a high rate of failure in every study. My expectation is that we will find the DRT to be a better predictive instrument than ASSET or the SDRT, but it will be 2-3 months before we can determine that.

BP

APPENDIX G: ACT Statistical Report

An Introduction to Your ASSET Grade Experience and Registration Summary Report

The ASSET Grade Experience/Registration Summary Report is a descriptive report designed to provide you with information about the relationships between entering assessment results and later success in individual courses. In addition, it provides a summary of the registration/enrollment activities in the first and/or second terms for ASSET students. The report combines the original ASSET measure performance of students as recorded on the white copy of the Educational Planning Form submitted to ACT, along with the course grades and enrollment information provided by the institution on the ASSET roster of participation. The report consists of two types of tables, one of which describes the grade experiences of students and the other which describes the enrollment pattern of participants.

THE ASSET GRADE EXPERIENCE TABLES

The ASSET Grade Experience Tables show the relationship between the number correct on selected ASSET scales and the grades assigned by instructors in different courses. Up to ten grade assignments (nine courses and an overall grade point average) may be investigated, resulting in a total of up to 20 individual tables to investigate the relationship of individual scales with the grades assigned.

The information in these tables can be very useful as a summary of the grade experiences of students. This information can assist the institution in identifying the educational experiences and outcomes of its students as information which then can be considered for future use in the advising and course placement process. A sample table is shown here as Table 1 as an illustration of the types of information summarized in each table. The table is divided into highlighted sections so as to emphasize particular kinds of information.

TABLE 1

(A) RELATIONSHIP OF READING SKILLS WITH HEALTH 010

(B) HEALTH 010 GRADE CATEGORIES	N-CT	%	(C) READING SKILLS NUMBER CORRECT (PERCENTAGE OF ENROLLEES ASSIGNED EACH GRADE BY NUMBER CORRECT) 0-13	14-15	16-17	18-19	20-23	24-26	27-40	(E) NUMBER CORRECT MEAN	S.D.
3.50 - 4.00 (A)	5	4	0	0	5	0	0	29	20	25.20	5.22
2.50 - 3.49 (B)	33	28	4	20	27	40	45	0	60	21.21	5.90
1.50 - 2.49 (C)	28	24	26	40	36	10	17	14	10	16.14	6.14
0.50 - 1.49 (D)	7	6	9	13	5	10	3	0	0	15.00	3.74
0.00 - 0.49 (F)	1	1	0	0	5	0	0	0	0	17.00	0.00
WITHDRAWAL (W)	38	33	57	27	18	40	31	43	10	16.58	5.79
INCOMPLETE (I)	4	3	4	0	5	0	3	14	0	18.25	6.90
ENROLLEES	116		23	15	22	10	29	7	10	18.13	6.29

(D)

(F) --- GRADE SUMMARY (A-F ONLY) ---

MEAN	2.46	1.89	2.09	2.29	2.50	2.63	3.33	3.11
S.D.	0.81	0.60	0.70	0.92	0.84	0.60	1.15	0.60
N-COUNT	74	9	11	17	6	19	3	9

(G) THE CORRELATION BETWEEN HEALTH 010 & READING SKILLS IS 0.44

CAUTION: THIS CORRELATION IS BASED ON A RELATIVELY SMALL N-COUNT.

Section A of the table identifies the ASSET measure being investigated and the course which the institution identified for its study.

Section B of the Grade Experience Table summarizes the grades assigned to the participants in that class. In Table 1, for example, a total of 116 students were enrolled in the course, with five receiving the grade of "A". A total of 28 students (24%) received a "C" grade, with 33% of the students choosing to withdraw before the completion of the term. Both the information about the withdrawal rates and the distribution of grades assigned can be very helpful information in summarizing the experiences of students in that particular course area.

Section C of the Grade Experience Table shows how students with differing test scores performed in the course. At the top of each column, scores (number correct) are listed for students grouped according to their performance on the scale. The figures beneath each heading indicate the percent of students with that score who received a particular grade. As may be seen in Table 1, of those students who scored the lowest on the Reading Skills measure (0 to 13 correct), a total of 26% received a "C" grade and 57% withdrew from the course. In contrast, of those who received the highest reading test scores (27 to 40 correct), a total of 90% of those students received an "A", "B", or "C" for their grade.

At the bottom of each column (Section D) is information which identifies the number of students who fell into each Reading Skills category. A total of 23 students had scores of 0 to 13, with 10 students having scores of 27 to 40. This information is very helpful in describing the actual range of skills of students who registered for that particular course. Course placement advising would be expected to result in an increased homogeneity of skills for students entering a particular course.

The information summarized in Section E provides a look at the average Reading Skills score (number correct) for students who received each different grade. For example, the "A" students had an average reading score of 25.20, while the withdrawing students had a test score average of 16.58, quite similar to the students who received a "C" grade (an average of 16.14). A faculty reviewing this pattern of information might well wish to advise future students with scores of 15-17 or below to seriously consider strengthening their reading skills prior to entering into this particular course. The pattern of relationships between reading skills and grades in this course indicates that good reading skills will be an important part of success in the course. In this case 15-17 might represent a "decision zone", while 0-14 scores would result in a strong faculty recommendation toward a reading development experience.

The data in Section F of the table summarize the grades assigned. In this particular case, there were 74 students who received grades of "A" through "F", resulting in an average grade of 2.46. In contrast, the average grade for the lowest reading students was 1.89, rising to grades of over 3.00 for students in the two top categories.

As indicated in Section G, the correlation between Health 10 and Reading Skills for this group of students is .44. In selected cases, a note will be added that a particular correlation is based on a relatively small N-count. This message appears whenever the N count is 50 or less students. The message is printed as a precautionary measure, to suggest that confidence in the stability of a particular correltaion coefficient is reduced as a function of the small number of cases on which it is based.

Table 2 summarizes the information provided in Table 1, with an emphasis on students receiving "C" or higher grades, sometimes referred to as

TABLE 2

SUMMARY OF PERCENT OF STUDENTS RECEIVING

C OR HIGHER GRADES

COURSE NAME	TOTAL ENROLLEES	REC'D C OR HIGHER GRADE	% REC'D C OR HIGHER GRADE	READING SKILLS (PERCENT OF ENROLLED RECEIVING C OR HIGHER BY NUMBER CORRECT) 0-13	14-19	20-24	25-28	29-33	34-36	37-40
HEALTH 10	116	66	57	30	60	68	50	62	43	90

"productive grades". As may be seen in Table 2, a total of 116 students enrolled in the course, with 66 receiving a "C" or higher grade for a total of 57%. The table also summarizes the varying "productive grade" activity of students with different test scores. This information can often be helpful in identifying key zones in which students are experiencing the most difficulties.

ASSET REGISTRATION SUMMARY

The data provided in the ASSET Registration Summary reviews the first and second term registration and enrollment information for the original ASSET participants. Table 3 is provided as an example. As illustrated in this sample, of the total 244 students who appeared on the ASSET roster, 919 enrolled in the fall term (78.3% of the total group). A total of 50 students did not enroll and the institution did not provide information for three of the students. Moving toward the right of the report, it may be seen that a total of 170 students of the original 244 completed at least one course the first term (a total of 69.7% of the original group). The institution indicated that 25 students did not complete a course. The institution provided no information for the first term experience for another 49 students. At the far right of the table, it may be seen that a total of 158 of the original students reenrolled for the second term (64.8%), with 35 designated as not having enrolled. The second term enrollment indicator was left blank for 51 students. This table provides a summary of enrollment and retention information which can be very helpful information for inclusion in campus discussions regarding the experiences of students.

TABLE 3

ASSET REGISTRATION SUMMARY 1983-84

FIRST AND SECOND TERM REGISTRATION/ENROLLMENT RETENTION SUMMARY
FOR ASSET PARTICIPANTS

TOTAL STUDENTS ON ASSET ROSTER		REGISTERED/ENROLLED FOR FIRST TERM		COMPLETED ONE/MORE COURSE FIRST TERM		REGISTERED/ENROLLED FOR SECOND TERM	
		N	%	N	%	N	%
244	YES	191	78.3	170	65.7	158	64.8
	NO	50	20.5	25	10.2	35	14.3
	BLANK	3	1.2	48	20.1	51	20.9

Interpreting Your Grade Experience Data

The information summarized in each of the Grade Experience Tables is provided for your institution so that you may review and investigate the relationships between the skills of your entering students and their later performance in various courses. In essence, the skill measurements are gathered at the time a student enters the institution to make predictions about their likely performance.

Within the context and use of the ASSET program, the purpose of prediction is "to assist students and institutions in designing educational programs that will prevent the undesirable outcomes from occuring". In a day-to-day practical situation, this means that the goal of the ASSET program is to facilitate the immediate identification of students whose skill pictures suggest possible future learning difficulties in particular courses, so the institution may immediately work with that student through the institution's resources to come up with a new plan which prevents that negative outcome from occuring. The goal is to generate a successful learning experience which then enables the student to move on to the next stage of learning.

Predictive information, in the form of skill measures at the time of entrance to an institution, describes what is likely to occur in the academic life of a student at a particular institution if two conditions occur:

a. If this student puts forth average effort, the prediction is likely to come true.

b. If the institution behaves toward this student as it behaves toward all other students, the prediction is likely to come true.

When reviewing these two conditions, it is clear that the predicted negative can potentially be overcome by working with the student to increase the effort that they invest in becoming successful and to lead the student

into particular learning environments at the institution (different levels of courses, additional tutoring help, approaches to increase the quality of the student's learning efforts). As a result, the student has a better opportunity to achieve successful outcomes in the learning experience.

In summary, the objective and purpose of using assessment is to identify areas of weakness or predicted difficulty and then to immediately "energize" the student and the resources of the institution so as to reduce the likli-hood of that negative from occuring. Within the ASSET program, we concentrate on energizing the assets of the institution.

Molds of Using Assessment Data

As a first step in preparing to interpret the Grade Experience Tables of your particular institution, it is neccesary to clarify just how the original skill measure information has been used with a particular group of students being studied. If the skill measurements have been gathered from students but the results (or other similar assessment information) have not been used to advise students and assist them in selecting courses, then one would expect stronger relationships between original test scores and grades. In this model (no feedback or advise to the student), the original skills of the student become an important determinant of the grades to be received. Literally, those students who entered with low skills become candidates for low grades, thus producing a prediction pattern which results in a higher correlation between the skill scores at the time of entry and grades received in a course. In effect, swimmers and non-swimmers are all introduced to the 12 foot end of the pool, with the easy-to-predict outcome that the non-swimmers (lowest skill students) get into the most difficulty.

However, in most insitutions using ASSET, a student-oriented "consumer-information" approach is likely to be used. When ability information is

gathered, it is immediately used to provide advice concerning appropriate recommendations to students. Students will then more frequently register for courses that are more related to their skill readiness level. As a result of learning more about their skills and how these relate to specific courses, students will also more likely be looking for additional positive ways to become successful. Staff members can capitalize on this potentially "productive anxiety" to immediately review the campus resources which help students increase their chances for success. Using this information, students can and will modify their planned approaches to studying and preparing for classes so as to increase their likelihood of success. In this model of assessment and advising services, the original skills score of the student may not be as strong a determinant of the final learning grade to be received by that student. Intentionally, the actual student work effort and interaction between the student and instructor will be a greater determinant of the learning that occurs as reflected in the final grade. It is this latter model which is the intended goal of the total use of the ASSET advising placement, and retiontion system.

Additional Factors Effecting Grade Predictability

In addition to the course placement activity and the effort of the student having potential impact on the predictive relationship between test scores and grades earned by students, several additional factors can become a part of the process. A key factor can involve the appropriate identification of a skill measure that has logical relationships to the grading criteria being used by the instructors. For example, because of the content of the course and the grading goals that an instructor has, the Numerical Skills measure would be expected to be more closely related to basic mathematics grades than would the Language Usage measure. Thus, it is important to review

the grading goals and criteria of a particular course and carefully match those with the themes that are being assessed by a particular measurement scale.

Another important factor would be that the assessment process is offered to all students in a standardized set of conditions involving the same amounts of time for all students, in environments which control and minimize external distractions as much as possible. Greater similarity and standardization in testing conditions will provide more consistent information across large numbers of students.

Similar concepts apply when reviewing the grade criteria to be used at the completion of particular courses. To the extent possible, consistency and similarity in grading definitions across all involved instructors for a specific course will lead to the most standardized and equivalent information in the grades to be assigned. Frequently this requires careful communication between all instructors (day and evening, part-time and full-time) as to what are the criteria to be used in assigning grades which reflect the learning achieved in the course. To the extent possible, similarity in grading standards across instructors within a particular course are an important part of the information necessary to the accurate interpretation of the grade experience information and its use in setting advising recommendations for future students. Even such options as variation in the way extra credit possibilities exist for increasing the grade of an individual can affect the observed relationship between original assessment scores and grades assigned at the end of the class.

Table 4 identifies several factors which frequently affect the accuracy of the predictive relationship between entry skill scores and course learning as reflected in grades. The examples in the left hand column focus on factors

TABLE 4

SOURCES OF ERROR IN COURSE GRADE PREDICTION

Prediction Factor	Results in higher correlation (less prediction error)	Results in lower correlation (more prediction error)
1. Assessment content match with grading criteria	(+) Good match of assessment scales and grading criteria Ex: Reading skills test used for courses with strong emphasis on text book as a significant resource necessary for good performance.	(-) Inappropriate match of assessment scales with skills to be used in assigning grades Ex: Language Usage used to predict performance in Elementary Algebra course.
2. Student attitude/assessment environment	(+) Assessment approach consciously promotes positive student understanding of purpose of information gathering; avoid external interruptions or conditions that preclude accurate assessment.	(-) Student attitude becomes "I don't care" or "I want to beat the system", resulting in incorrect or inaccurate picture of the individual's skills.
3. Immediate data feedback to students	(-) No feedback on skills often results in larger numbers of weaker students getting in over their heads.	(+) Students with identified deficiencies may become anxious enough to want to learn about and immediately implement success behaviors and campus resources.
4. Instructional resources	(-) Large classes with students heterogeneous with respect to relevant skills and few opportunities for individual attention and support mean that those who begin with the most skill have the best chance to survive.	(+) Smaller classes with more skill homogeneity allows instructor to teach at a level appropriate for total class; availability of outside-of-class learning support resources such as tutors, skill development seminars (how to study, note taking, read for the main idea, time arrangement, etc.), resource center packages can increase student success, beating the prediction that would be generated on the basis of entry skills. Exciting instructors can inspire students to greater effort and accomplishment.

TABLE 4 (Continued)

Prediction Factor	Results in higher correlation (less prediction error)	Results in lower correlation (more prediction error)
5. Student effort	(-) Students putting forth average effort will tend to receive grades which reflect their original strengths on relevant skill measures.	(+) Students whose motivation to succeed is energized will put in more effort to increase their chances for success, resulting in learning (as expressed by grades) which exceeds the prediction based solely on entry skills.
6. Grading criteria/Practices	(+) Clear, consistent learning objectives and grading practices across instructors in a specific course area will reduce errors in the grade criteria, while assuring greater evaluation equity for students.	(-) Unclear course goals, learning objectives, and grading criteria result in difficulties for students and faculties and introduce error in predictions. Grades heavily influenced by attendance rather than performance will have less relationship to entry skills of students.

and conditions which normally would serve to increase the correlation values. Examples at the right describe conditions which would tend to reduce the correlation between entry skill scores and course grades.

The plus (+) symbols identify situations which are generally in the best interests of the student in terms of a most productive learning experience. The minus (-) symbol identifies a condition which is not positive for the student's learning.

When reviewing each individual grade experience table for an institution, it is recommended that the data be analyzed with these six factors in mind. For example, a correlation in the area of .40 or higher can provide valuable information for use if advising. As found in the Table 1 example, a significant amount of difficulty in the Health 010 course could perhaps be avoided or reduced by early efforts toward reading skill developement with the students with the lowest reading scores. Immediate feedback of reading score results (factor 3) in combination with concrete suggestions for use of institution resources (factor 4) could potentially increase future student success and thus avoid the negatives that were otherwise predicted.

Conversely, a lower correlation may be very consistent with the institution's goals and efforts to help "at risk" students become successful by focusing on the concepts listed at the right for factors 3, 4, and 5. However, it is also possible that low correlations of entry skills and grades may be reflecting the conditions at the right of the chart for factors 1, 2, and 6. Local review of the conditions surrounding each course and the services offered to students are a necessary step for the appropriate interpretation of the grade experience data.

A S S E T R E G I S T R A T I O N S U M M A R Y 1 9 8 3 - 8 4

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

CODE 0422

FIRST AND SECOND TERM REGISTRATION/ENROLLMENT RETENTION SUMMARY
FOR ASSET PARTICIPANTS

TOTAL STUDENTS ON ASSET ROSTER		REGISTERED/ENROLLED FOR FIRST TERM		COMPLETED ONE/MORE COURSE FIRST TERM		REGISTERED/ENROLL FOR SECOND TERM	
		N	%	N	%	N	%
205	YES	195	95.1	178	86.8	154	75.1
	NO	8	3.9	25	12.2	49	23.9
	BLANK	2	1.0	2	1.0	2	1.0

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

RELATIONSHIP OF
READING SKILLS
WITH
ENGL 1A

ENGL 1A GRADE CATEGORIES	N-CT	%	READING SKILLS NUMBER CORRECT (PERCENTAGE OF ENROLLEES ASSIGNED EACH GRADE BY NUMBER CORRECT) 0-13	14-19	20-24	25-28	29-33	34-36	37-40	NUMBER CORRECT MEAN	S.D.
3.50 - 4.00 (A)	3	9	0	0	0	0	0	25	14	37.00	1.73
2.50 - 3.49 (B)	9	27	100	0	0	25	20	25	43	31.89	8.55
1.50 - 2.49 (C)	8	24	0	0	33	75	30	0	14	29.50	4.38
0.50 - 1.49 (D)	2	6	0	0	0	0	10	0	14	34.50	4.95
0.00 - 0.49 (F)	6	18	0	0	0	0	20	50	0	33.50	2.81
WITHDRAWAL (W)	5	15	0	0	67	0	20	0	14	29.20	6.83
INCOMPLETE (I)	0	0	0	0	0	0	0	0	0	0.00	0.00
ENROLLEES	33		1	0	3	4	10	8	7	31.82	6.03

--- GRADE SUMMARY (A-F ONLY) ---

MEAN	2.04	3.00	.00	2.00	2.25	1.63	1.75	2.67
S.D.	1.32	.00	.00	.00	0.50	1.19	1.91	1.03
N-COUNT	28	1	0	1	4	8	8	6

THE CORRELATION BETWEEN ENGL 1A & READING SKILLS IS 0.03

CAUTION: THIS CORRELATION IS BASED ON A RELATIVELY SMALL N-COUNT.

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RELATIONSHIP OF
ADVNACED LANGUAGE USAGE
WITH
ENGL 1A

ENGL 1A GRADE CATEGORIES	N-CT	%	ADVNACED LANGUAGE USAGE NUMBER CORRECT (PERCENTAGE OF ENROLLEES ASSIGNED EACH GRADE BY NUMBER CORRECT) 0-14	15-19	20-23	24-27	28-31	32-36	37-40	NUMBER CORRECT MEAN	S.D.
3.50 - 4.00 (A)	2	9	0	0	0	0	0	0	50	38.00	1.41
2.50 - 3.49 (B)	6	29	0	100	0	20	29	67	0	28.00	6.10
1.50 - 2.49 (C)	6	29	0	0	0	60	29	33	0	27.50	2.59
0.50 - 1.49 (D)	2	9	0	0	0	20	0	0	25	31.50	10.61
0.00 - 0.49 (F)	3	14	100	0	0	0	29	0	0	23.00	11.36
WITHDRAWAL (W)	2	9	0	0	0	0	14	0	25	35.50	6.36
INCOMPLETE (I)	0	0	0	0	0	0	0	0	0	0.00	0.00
ENROLLEES	21		1	1	0	5	7	3	4	29.14	7.14
--- GRADE SUMMARY (A-F ONLY) ---											
MEAN	2.11		0.00	3.00	.00	2.00	1.67	2.67	3.00		
S.D.	1.24		.00	.00	.00	0.71	1.37	0.58	1.73		
N-COUNT	19		1	1	0	5	6	3	3		

THE CORRELATION BETWEEN ENGL 1A & ADVNACED LANGUAGE USAGE IS 0.39

CAUTION: THIS CORRELATION IS BASED ON A RELATIVELY SMALL N-COUNT.

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RELATIONSHIP OF
READING SKILLS
WITH
ENGL 100

CASES FOUND : 11
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE FARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

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RELATIONSHIP OF
READING SKILLS
WITH
ENGL 100

CASES FOUND : 11
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE FARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

RELATIONSHIP OF
READING SKILLS
WITH
MATH 150A

CASES FOUND : 17
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE FARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

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RELATIONSHIP OF
ELEMENTARY ALGEBRA
WITH
MATH 150A

CASES FOUND : 17
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MEHINE FARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

RELATIONSHIP OF
INTERMEDIATE ALGEBRA
WITH
MATH 56

CASES FOUND : 0
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE PARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

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RELATIONSHIP OF
SPACE RELATIONS
WITH
MATH 56

CASES FOUND : 16
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE FARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

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RELATIONSHIP OF
READING SKILLS
WITH
HIST 17A

CASES FOUND : 21
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE FARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

CODE : 0422
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RELATIONSHIP OF
ADVNACED LANGUAGE USAGE
WITH
HIST 17A

CASES FOUND : 8
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE FARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

CODE : 0422
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RELATIONSHIP OF
READING SKILLS
WITH
PSYCH 1A

CASES FOUND : 21
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE FARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

CODE : 0422
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RELATIONSHIP OF
ADVNACED LANGUAGE USAGE
WITH
PSYCH 1A

CASES FOUND : 17
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE FARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

CODE : 0422
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RELATIONSHIP OF
READING SKILLS
WITH
BIO 11

CASES FOUND : 13
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE FARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

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RELATIONSHIP OF
NUMERICAL SKILLS
WITH
BIO 11

CASES FOUND : 13
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE FARNER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

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RELATIONSHIP OF
READING SKILLS
WITH
BUS AD 50

CASES FOUND : 8
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE FARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

CODE : 0422
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RELATIONSHIP OF
ADVNACED LANGUAGE USAGE
WITH
BUS AD 50

CASES FOUND : 8
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE FARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

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RELATIONSHIP OF
READING SKILLS
WITH
POLI SCI 60

CASES FOUND : 13
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE FARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

CODE : 0422
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RELATIONSHIP OF
ADVNACED LANGUAGE USAGE
WITH
POLI SCI 60

CASES FOUND : 7
THERE ARE INSUFFICIENT CASES FOR ANALYSIS.
IF YOU WISH TO ADD THESE CASES TO ADDITIONAL CASES
FOR THE SAME COURSES IN THE PREVIOUS YEAR OR
IN THE FUTURE, PLEASE CONTACT MERINE FARMER
DIRECTOR OF RESEARCH SERVICES, AT ACT (319/337-1113)

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

RELATIONSHIP OF
LANGUAGE USAGE
WITH
OVERALL GPA

OVERALL GPA GRADE CATEGORIES	N-CT	%	LANGUAGE USAGE NUMBER CORRECT (PERCENTAGE OF ENROLLEES ASSIGNED EACH GRADE BY NUMBER CORRECT) 0-35	36-39	40-45	46-49	50-52	53-57	58-64	NUMBER CORRECT MEAN	S.D.
3.50 - 4.00 (A)	23	12	0	0	8	17	9	11	44	52.65	6.13
2.50 - 3.49 (B)	74	39	44	27	36	30	36	44	50	46.89	10.69
1.50 - 2.49 (C)	61	32	30	36	36	33	36	36	6	46.21	7.82
0.50 - 1.49 (D)	18	9	11	27	14	7	9	6	0	42.78	7.88
0.00 - 0.49 (F)	15	8	15	9	6	13	9	3	0	41.27	11.76
WITHDRAWAL (W)	0	0	0	0	0	0	0	0	0	0.00	0.00
INCOMPLETE (I)	0	0	0	0	0	0	0	0	0	0.00	0.00
ENROLLEES	191		27	11	36	30	33	36	18	46.54	9.56
--- GRADE SUMMARY (A-F ONLY) ---											
MEAN	2.33		1.98	1.76	2.26	2.22	2.25	2.53	3.30		
S.D.	1.02		1.04	1.01	0.97	1.12	1.02	0.86	0.48		
N-COUNT	191		27	11	36	30	33	36	18		

THE CORRELATION BETWEEN OVERALL GPA & LANGUAGE USAGE IS 0.28

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

RELATIONSHIP OF
READING SKILLS
WITH
OVERALL GPA

OVERALL GPA GRADE CATEGORIES	N-CT	%	READING SKILLS NUMBER CORRECT (PERCENTAGE OF ENROLLEES ASSIGNED EACH GRADE BY NUMBER CORRECT) 0-13	14-19	20-24	25-28	29-33	34-36	37-40	NUMBER CORRECT MEAN	S.D.
3.50 - 4.00 (A)	23	12	0	9	0	19	9	11	24	32.22	6.38
2.50 - 3.49 (B)	74	39	38	64	33	16	45	40	48	29.82	7.88
1.50 - 2.49 (C)	60	32	50	18	33	34	34	31	24	28.78	7.76
0.50 - 1.49 (D)	18	9	0	9	21	19	2	11	3	27.56	6.39
0.00 - 0.49 (F)	15	8	13	0	13	13	11	6	0	27.00	6.82
WITHDRAWAL (W)	0	0	0	0	0	0	0	0	0	0.00	0.00
INCOMPLETE (I)	0	0	0	0	0	0	0	0	0	0.00	0.00
ENROLLEES	190		8	11	24	32	47	35	33	29.35	7.52
--- GRADE SUMMARY (A-F ONLY) ---											
MEAN	2.34		2.10	2.68	1.83	2.10	2.39	2.31	2.84		
S.D.	1.02		0.95	0.72	1.01	1.20	0.99	1.02	0.76		
N-COUNT	190		8	11	24	32	47	35	33		

THE CORRELATION BETWEEN OVERALL GPA & READING SKILLS IS 0.17

SANTA ROSA JUNIOR COLLEGE
SANTA ROSA CA

RELATIONSHIP OF
NUMERICAL SKILLS
WITH
OVERALL GPA

OVERALL GPA GRADE CATEGORIES	N-CT	%	NUMERICAL SKILLS NUMBER CORRECT (PERCENTAGE OF ENROLLEES ASSIGNED EACH GRADE BY NUMBER CORRECT) 0-12	13-15	16-19	20-23	24-26	27-29	30-32	NUMBER CORRECT MEAN	S.D.
3.50 - 4.00 (A)	23	12	0	7	7	11	11.	15	35	25.83	5.10
2.50 - 3.49 (B)	74	39	7	47	32	42	36	50	47	23.51	5.33
1.50 - 2.49 (C)	61	32	36	20	46	32	40	21	18	21.72	5.79
0.50 - 1.49 (D)	18	9	21	13	11	5	11	9	0	20.39	6.24
0.00 - 0.49 (F)	15	8	36	13	4	11	2	6	0	17.40	7.03
WITHDRAWAL (W)	0	0	0	0	0	0	0	0	0	0.00	0.00
INCOMPLETE (I)	0	0	0	0	0	0	0	0	0	0.00	0.00
ENROLLEES	191		14	15	28	38	45	34	17	22.45	6.00
--- GRADE SUMMARY (A-F ONLY) ---											
MEAN	2.33		1.16	2.05	2.20	2.32	2.45	2.56	3.03		
S.D.	1.02		1.05	1.08	0.91	1.01	0.86	1.00	0.71		
N-COUNT	191		14	15	28	38	45	34	17		

THE CORRELATION BETWEEN OVERALL GPA & NUMERICAL SKILLS IS 0.36

SUMMARY OF PERCENT OF STUDENTS RECEIVING C OR HIGHER GRADES

COURSE NAME	TOTAL ENROLLEES	REC'D C OR HIGHER GRADE	% REC'D C OR HIGHER GRADE	READING SKILLS (PERCENT OF ENROLLED RECEIVING C OR HIGHER BY NUMBER CORRECT) 0-13	14-19	20-24	25-28	29-33	34-36	37-40
ENGL 1A	33	20	61	100	0	33	100	50	50	71

COURSE NAME	TOTAL ENROLLEES	REC'D C OR HIGHER GRADE	% REC'D C OR HIGHER GRADE	ADVNACED LANGUAGE USAGE (PERCENT OF ENROLLED RECEIVING C OR HIGHER BY NUMBER CORRECT) 0-14	15-19	20-23	24-27	28-31	32-36	37-40
ENGL 1A	21	14	67	0	100	0	80	57	100	50

SUMMARY OF PERCENT OF STUDENTS RECEIVING C OR HIGHER GRADES

COURSE NAME	TOTAL ENROLLEES	REC'D C OR HIGHER GRADE	% REC'D C OR HIGHER GRADE	LANGUAGE USAGE (PERCENT OF ENROLLED RECEIVING C OR HIGHER BY NUMBER CORRECT) 0-35	36-39	40-45	46-49	50-52	53-57	58-64
OVERALL GPA	191	158	83	74	64	81	80	82	92	100

COURSE NAME	TOTAL ENROLLEES	REC'D C OR HIGHER GRADE	% REC'D C OR HIGHER GRADE	READING SKILLS (PERCENT OF ENROLLED RECEIVING C OR HIGHER BY NUMBER CORRECT) 0-13	14-19	20-24	25-28	29-33	34-36	37-40
OVERALL GPA	190	157	83	88	91	67	69	87	83	97

SUMMARY OF PERCENT OF STUDENTS RECEIVING
C OR HIGHER GRADES

COURSE NAME	TOTAL ENROLLEES	REC'D C OR HIGHER GRADE	% REC'D C OR HIGHER GRADE	NUMERICAL SKILLS (PERCENT OF ENROLLED RECEIVING C OR HIGHER BY NUMBER CORRECT) 0-12	13-15	16-19	20-23	24-26	27-29	30-
OVERALL GPA	191	158	83	43	73	86	84	87	85	1

ERIC Clearinghouse for Junior Colleges
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University of California
Los Angeles, California 90024

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